GEOLOGICAL SURVEY OF CANADA

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Indicator mineral and till geochemical dispersal associated with the Ranch Lake kimberlite, Lac de Gras region, Northwest Territories

M.B. McClenaghan, B.C. Ward, I.M. Kjarsgaard, B.A. Kjarsgaard, J.A.R. Stirling, D.E. Kerr, and L.A. Dredge

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Contribution to the Slave NATMAP project

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ABSTRACT

The Geological Survey of Canada collected till samples around the Ranch Lake kimberlite, southern Contwoyto map sheet (NTS 76E), Northwest Territories, to document glacial dispersal patterns defined by kimberlite indicator minerals and till geochemistry. This was accomplished using: 1) unpublished indicator mineral abundance data provided by Tahera Corporation; 2) a small number of till samples collected by the GSC to recover indicator minerals for microprobe analysis and examination of surface features and textures of pyrope; 3) a large number of till samples collected by GSC for till geochemical studies; and 4) bedrock samples of the Ranch Lake kimberlite. The results of this study will aid in the design of mineral exploration programs for kimberlite-hosted diamond deposits in glaciated terrain.

The Ranch Lake pipe consists of volcaniclastic crater facies kimberlite which contains thousands of indicator mineral grains in a 10-kg sample. Cr-diopside and pyrope are the most abundant indicator minerals in the Ranch Lake kimberlite followed by much less abundant chromite and rare Mg-ilmenite. The relative abundances of these four indicator minerals in the kimberlite are mimicked in till down-ice (west). Indicator minerals in the till extend down-ice for at least 70 km in a narrow (0.5 to 2 km wide) ribbon-shaped dispersal train. Of the two size fractions of GSC till samples examined, most indicator minerals occur in the finer, 0.25 to 0.5 mm, fraction. The <0.063 mm fraction of till displays weak geochemical signatures of the kimberlite down-ice, most notably for Ba, Cr, Ce and Th. The abundance of pyrope grains with kelyphite, generally considered to be very easily eroded, decreases with increasing distance down-ice. This pattern suggests that kelyphite can be an indicator of relative distance of glacial transport.

INTRODUCTION

Purpose

The Quaternary geology component of the Geological Survey of Canada (GSC) Slave Province National Geoscience Mapping Program (NATMAP) was designed to provide a regional framework for geologic interpretations, environmental management and mineral exploration using drift prospecting (Dredge et al., 1994). In 1994, Terrain Sciences Division of the GSC mapped the surficial geology of the southern half of the Contwoyto Lake map area. The project involved helicopter-assisted ground work including terrain mapping at a scale of 1:60,000, till sampling, and measuring of ice flow indicators. In addition to the regional work, detailed till sampling was undertaken around two known kimberlites in the southern Contwoyto area, the Torrie and Ranch Lake pipes.

This report describes the glacial dispersal train associated with the Ranch Lake kimberlite. Interpretations presented in this report are based on: 1) unpublished indicator mineral abundance data provided by Tahera Corporation; 2) a small number of till samples collected by the GSC to recover indicator minerals for microprobe analysis and examination of surface features and textures of pyrope; 3) a large number of till samples collected by GSC for till geochemistry studies; and 4) bedrock samples of the Ranch Lake kimberlite. Using the combined datasets, the objectives of this study were to: 1) document the indicator mineral abundances in, and chemistry of, the Ranch Lake kimberlite; 2) document indicator mineral abundance patterns in till down-ice; 3) document the till geochemical signature of the kimberlite down-ice; and 4) estimate the effect of glacial abrasion with increasing distance down-ice by examining surface features and textures on pyrope.

Location

The Ranch Lake kimberlite is located in the southwest portion of the Contwoyto map area (NTS 76E, UTM Zone 12) in the central Slave Province, Northwest Territories (Fig. 1), at latitude 65° 16'N and longitude 111° 30'W. It is approximately 350 km north-northeast of Yellowknife and 100 km north-northwest of the Ekati diamond mine at Lac de Gras. The Ranch Lake kimberlite underlies Ranch Lake (Photo 1), which is approximately 30 m deep. Access to the area is only by air.

Local geography

Surface elevations in the vicinity of Ranch Lake range between 414 and 520 m asl. Local relief is low, commonly less than 10 m in areas of bare bedrock and continuous till (till blanket). Relief greater than 15 m is common in areas of hummocky till, and rugged rocky areas around Yamba Lake have about 50 m local relief. Numerous lakes occupy glacially scoured bedrock basins and small ponds occupy depressions on the till surface. Most drainage ways are shallow; modern streams have not cut into bedrock or the till plain. The area is in the Arctic drainage system with Contwoyto Lake straddling the drainage divide between water flowing to the north to Bathurst Inlet via Burnside River and water flowing south and then northeast to Chantrey Inlet via the Back River. The area is north of the treeline with most glacial deposits having a cover of low shrubs, alders, and tundra heath vegetation; bedrock is commonly lichen covered. Permafrost

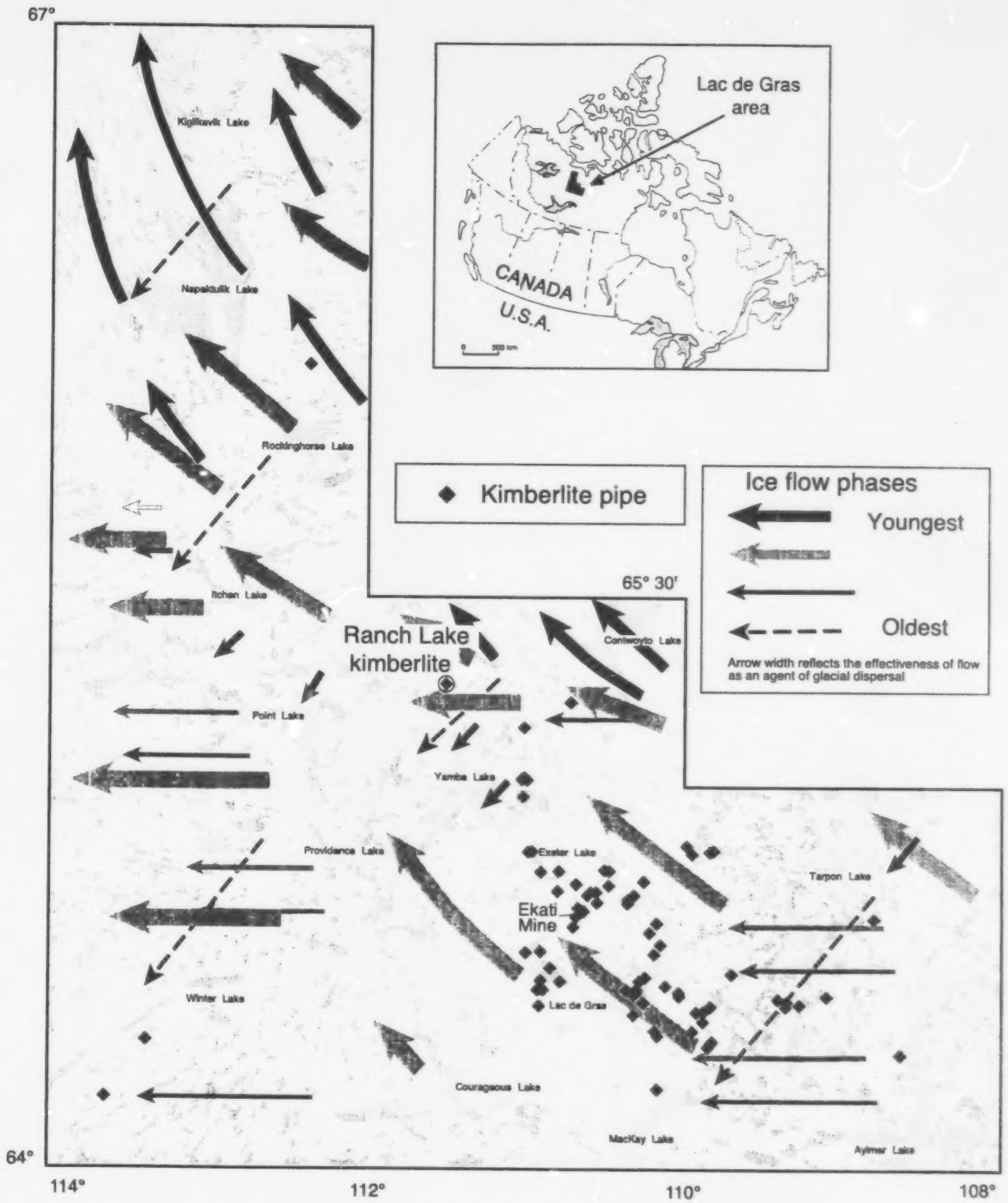


Figure 1. Location of the Ranch Lake kimberlite in the Lac de Gras kimberlite field and regional ice flow patterns (from Dredge et al, 1997).

Photo 1. Elliptical lake in the middle of the photograph is underlain by the Ranch Lake kimberlite. Local surficial sediments consist of till veneer and minor till blanket overlying becrock outcrops.

is ubiquitous.

REGIONAL GEOLOGY

Bedrock geology

The Contwoyto Lake area lies within the Archean Slave Geological Province (Fig. 2). Bostock (1980) originally mapped the Archean rocks of the area, and more detailed mapping and related thematic studies were reported by King et al. (1990), Gebert and Jackson (1994), Davis et al. (1994), Bleeker and Davis (1999) and Bleeker et al. (1999). The oldest (2.82 to 3.32 Ga) basement rocks in the general region consist of foliated granodioritic to tonalitic rocks and related granitoid gneiss, which are termed the Central Slave Basement Complex, or CSBC (Bleeker and Davis, 1999). These old rocks are not found in the immediate vicinity of Ranch Lake, but lie 70 km to the west at Point Lake (3.23 Ga), and also 100 km south at Courageous Lake (3.33 Ga). Immediately overlying the CSBC is a thin ca. 2.8 Ga cover sequence, which is in turn structurally overlain by post 2.72 – 2.66 Ga volcanic and turbiditic sedimentary rocks belonging to the Yellowknife Supergroup, or YKS (McGlynn and Henderson, 1972; Padgham and Atkinson, 1991; Villeneuve et al., 1997). Plutonic rocks intrude the lithologic units of the CSBC, the CSBC cover sequence and the YKS during the time interval 2.71 to 2.58 Ga (Villeneuve et al., 1997). With the exception of some of the youngest granitoid rocks, all these rocks have been variably folded, faulted, and metamorphosed to various degrees. The region is transected by a variety of unmetamorphosed Proterozoic diabase dykes, of which, the northwest-trending 1.27 Ga Mackenzie swarm is the most prominent (Le Cheminant and van Breeman, 1994). Based on preliminary interpretation of aeromagnetic maps, coupled with previous studies on diabase dykes in the Lac de Gras area immediately to the south (Kjarsgaard and Wylie, 1993; Kjarsgaard et al. 1994a, b; 1999), it appears that Proterozoic Malley (2.23 Ga), MacKay (2.21 Ga) and Lac de Gras (2.03 Ga) diabase dykes are also present in the Contwoyto map area. In the vicinity of the Ranch Lake kimberlite (Figure 3), the local bedrock consists of migmatite-grade metasedimentary rocks of the Itchen Formation of the Yellowknife Supergroup, which are intruded by ca. 2.61 Ga hornblende-biotite granitoids, and ca. 2.58 Ga biotite granite (King et al., 1990; Davis et al. 1994).

Kimberlite geology

The Ranch Lake kimberlite was emplaced into a belt of YKS metasedimentary rocks, which contains numerous, variably sized bodies of granitoid rocks. The kimberlite intruded the youngest of the two plutonic suites of rocks in the area (Sandberg, 1993). The walls of the kimberlite are approximately coincident with the lake shore and are steeply dipping at average angles of 80 to 85°, except along the southern shore where they range from 45 to 70° (Sandberg, 1993). The kimberlite has an approximate oval surface shape (600 m long and 300 m wide), with an area of 12.4 hectares (31.0 acres), which decreases to 5.7 hectares (14.3 acres) at a depth of 235 m (Sandberg, 1993).

The upper portion of the kimberlite is typically gray to brown in colour, weathered and highly contaminated with crustal material. Kimberlite samples from deeper levels are

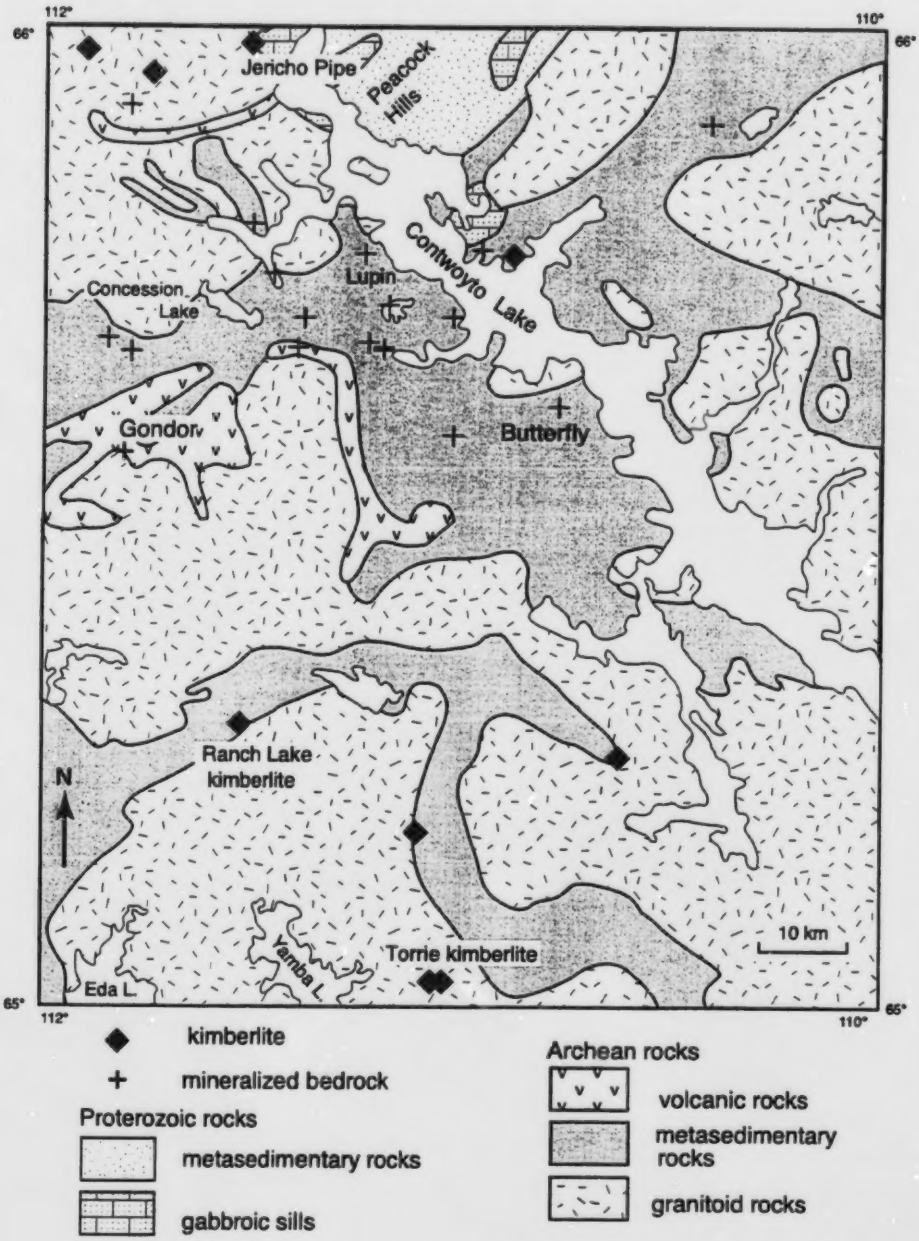


Figure 2. Simplified bedrock geology of the Contwoyto Lake area (modified after Gebert and Jackson, 1994 and King et al.,1990).

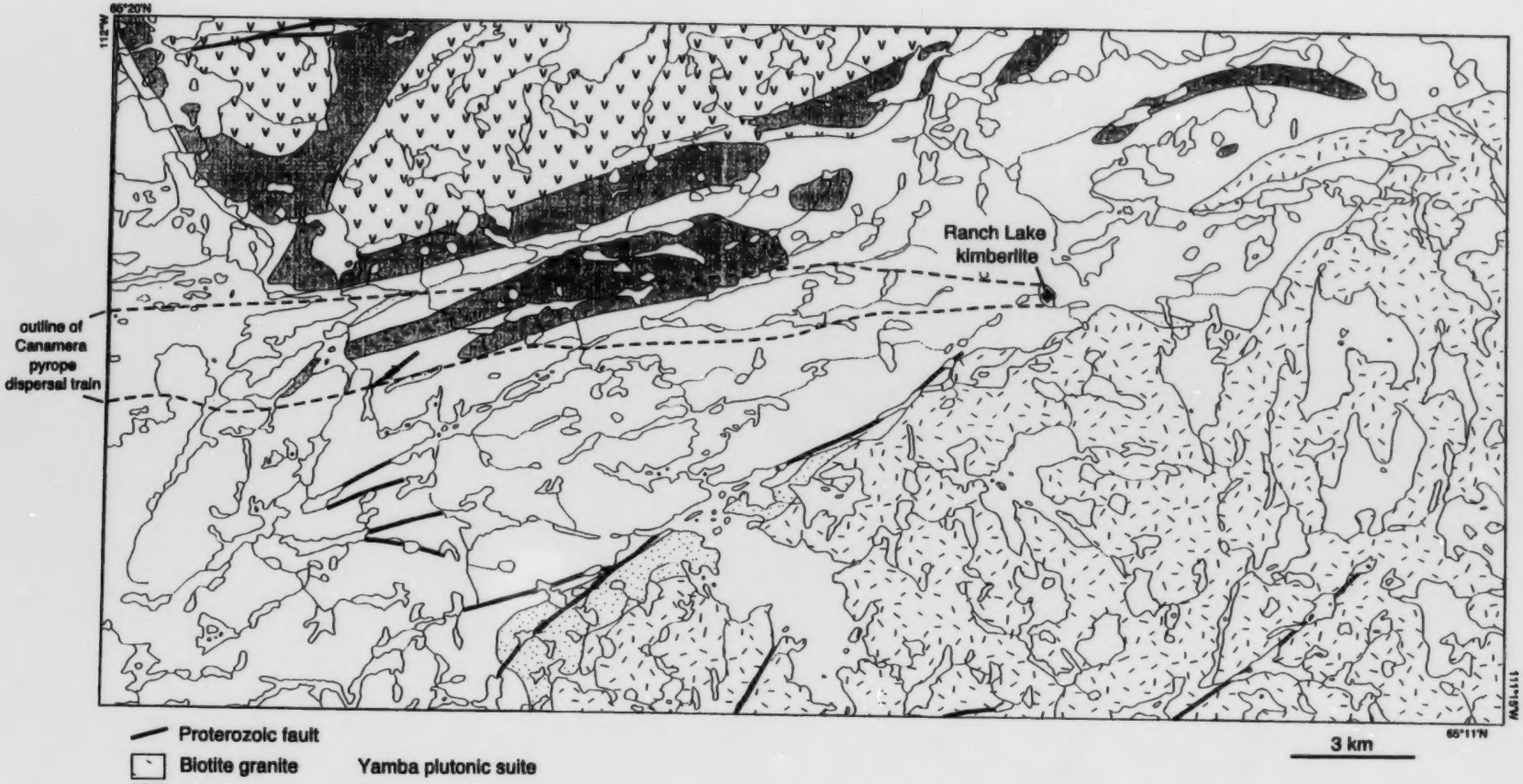


Figure 3. Bedrock geology of the Ranch Lake area (geology from King et al., 1991; Davis et al., 1994) and location of the Canamera pyrope dispersal train in overlying glacial sediments.

pale to dark green in colour (Photo 2). Xenolithic material of mudstone, granitic rocks, mantle derived peridotite, and wood comprises 10 to 20% of the kimberlite, but can be up to 50% (Sandberg, 1993). Hence these rocks can be termed kimberlite breccias. Olivine is the most common macrocryst with lesser amounts of Cr-diopside, pyrope, phlogopite and rare ilmenite. Also present, and common, are xenocrystic bictite, feldspar and quartz derived from granitic country rocks. The groundmass is comprised of secondary clay minerals and calcite. Variably sized kimberlitic lapilli are also present, and these kimberlites are regarded as volcaniclastic in origin i.e. crater facies kimberlite.

The age of the Ranch Lake kimberlite has not been determined, but Cretaceous age mudstones recovered from this pipe (Carlson et al., 1999), along with the presence of wood fragments provide a Cretaceous maximum emplacement age for the Ranch Lake kimberlite. This in turn suggests that Ranch Lake is part of the Cretaceous – Eocene Lac de Gras kimberlite field, and is thus one of the most northerly kimberlites in the field. The Lac de Gras kimberlite field formed during the Late Cretaceous to Early Tertiary, as constrained by a U-Pb perovskite age of 86 ± 2 Ma and an Rb/Sr phlogopite age of 47.5 ± 0.5 Ma and (Kjarsgaard and Heaman, 1995; Davis and Kjarsgaard, 1997). Early Cretaceous to Early Tertiary microfossils and fish remains preserved in mudstone xenoliths within some of the Lac de Gras kimberlites (Nassichuk and Mcintyre, 1995; Carlson et al., 1999; Doyle et al., 1999) confirm these isotopic ages.

The Lac de Gras kimberlite field

Fipke et al. (1995) and Blusson (1998) have described the initial discovery of the Lac de Gras kimberlite field, which triggered one of the largest staking rushes in Canadian mining history. Exploration started in 1981 in the Mackenzie Mountains. Regional glacial sediment sampling was used to follow indicator minerals in stream and glacial sediments up-ice over 500 km eastward to the Lac de Gras region. In 1985, exploration by DiaMet Minerals Ltd. led to the discovery of three highly anomalous samples in the Lac de Gras area. Samples collected further to the east of Lac de Gras were barren. DiaMet Minerals Ltd. continued sampling, refining the area of anomalous samples. In 1990, a sample was collected that contained very high counts of kimberlite indicator minerals, near the shore of a small lake. DiaMet Minerals Ltd. then formed a joint venture with BHP Minerals Ltd. to further explore the staked property. Detailed ground geophysical surveys over the "Point lake" site guided drilling, and kimberlite was intersected in September of 1991. This core returned 81 diamonds from 59 kg of core. The subsequent staking rush resulted in approximately 20 million hectares being acquired by both major (De Beers, Kennecott/RTZ and Ashton) and junior mining companies (e.g. Aber, SouthernEra, Lytton Minerals). More than 200 kimberlites have been discovered in the Slave Craton through till and glaciofluvial sand sampling for indicator minerals, as well as geophysical surveys (Armstrong, 1998, 2000; Carlson et al., 1999).

Initial prospecting on the Ice Claims

Lytton Minerals Ltd., one of the companies involved in the initial Lac de Gras diamond staking rush, staked the Ice Claims (430,000 hectares) northwest of the main DiaMet

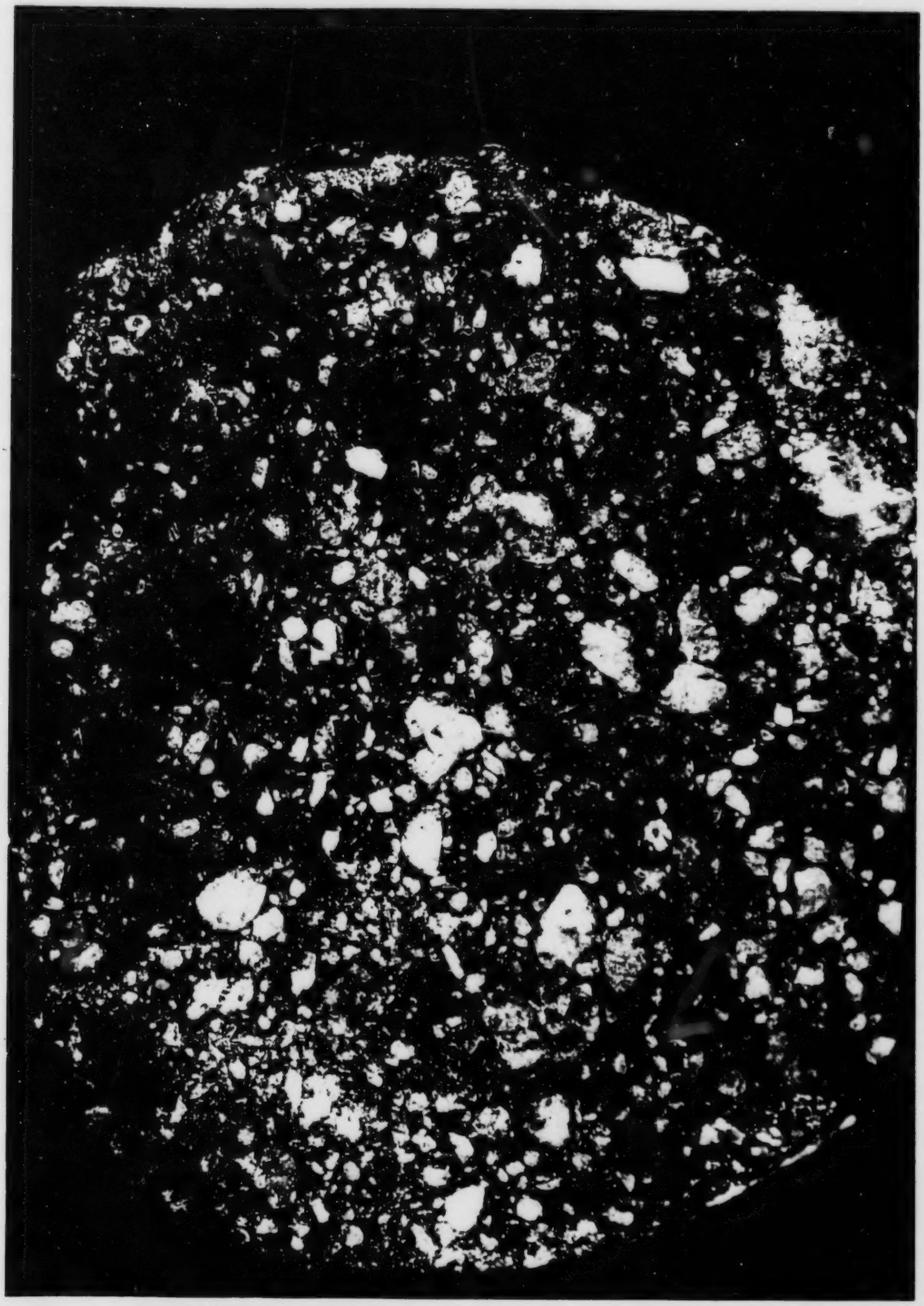


Photo2. Crater facies sample from the Ranch Lake kimberlite.

Minerals/BHP claim block. Canamera Geological Ltd., referred to hereafter as Canamera, was hired by Lytton Minerals Ltd. to conduct exploration on the Ice Claims (including the Ranch Lake area) and to act as the contact for sample processing and indicator mineral picking of till sample collected on the claims. Lytton Minerals and its Ranch Lake property are now part of Tahera Corporation.

Initial till sampling identified an anomalous till sample (sample 6493) which contained 493 pyrope and 549 Cr-diopside. Indicator mineral counts for numerous till samples, and airborne and ground based geophysical surveys conducted in the vicinity of Ranch Lake were consistent with a kimberlite underlying Ranch Lake. Drilling on March 18, 1993 confirmed the presence of kimberlite (Sandberg, 1993). Anomalous sample 6493 turned out to be 9 km down-ice (west) of the Ranch Lake kimberlite.

Subsequent to the kimberlite discovery, Canamera identified a well developed glacial dispersal train extending westward from Ranch Lake by visually identifying pyrope, Cr-diopside (Fig. 3), eclogitic garnet, chromite and Mg-ilmenite grains in approximately 1400 till samples collected at varying distances up- and down-ice of Ranch Lake. Till samples weighed between 20 and 25 kg and indicator minerals were picked from the 0.42 to 0.84 mm (-20+40 mesh) fraction.

Surficial geology

Nature of deposits - regional

Craig (1960), Blake (1963), Kerr et al. (1995) and Dredge et al. (1999) have described the glacial geology of the Contwoyto area. Preliminary maps based on limited field work of the northern three-quarters of the Contwoyto map area were published by Hart et al. (1989) and the surficial geology of the southern half of the Contwoyto Lake sheet was mapped by Ward et al. (1996a, 1997a). The area is a glaciated landscape, and till is the most extensive glacial deposit (Figs. 4 and 5). Only one stratigraphic unit of till has been recognized based on surficial sampling, and it was deposited by the Late Wisconsinan Laurentide Ice Sheet. Till is divided into three terrain units based on thickness and surface morphology: 1) till veneer (thin: <2 m); 2) till blanket (thicker: 2 to 10 m); and, 3) hummocky till (thickest: 5 to 30 m). Till veneers and blankets are pervasive throughout the area. Till veneers commonly have a bouldery surface, while blankets have a range of boulder concentrations. Hummocky till forms a broad belt trending northwest-southeast across the central part of the area, and contains narrow bouldery glaciofluvial corridors (zones) where the till has been extensively winnowed by meltwater. The till is a matrix-supported diamicton, with the matrix ranging from silty sand to sand with low percentages of clay (Fig. 6). The clast content of the tills varies between ~5 and 30% with most being between 10 to 15%.

Glaciofluvial deposits are limited in extent and are predominantly in the form of eskers, and related kames. Eskers lie north and south of the belt of hummocky till (Fig. 4), and trend west and northwest. Meltwater corridors of bare washed rock flank the main esker ridges or connect esker segments. Kames are restricted to the area south of Fry Inlet, 50 km east of Ranch Lake.

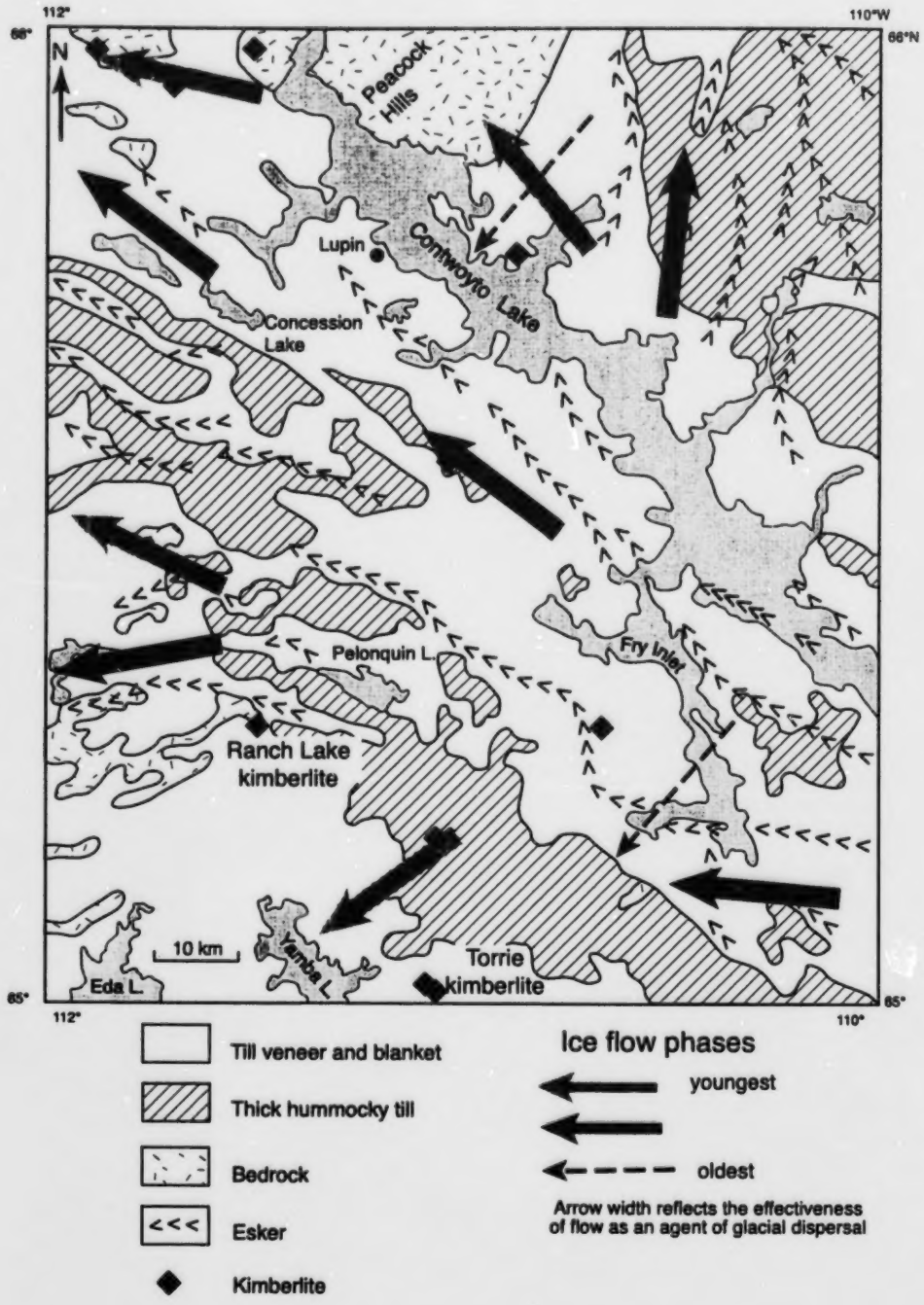


Figure 4. Simplified surficial geology and regional ice flow patterns of the Contwoyto Lake area (modified after Ward et al., 1996a; Kerr et al., 1995).

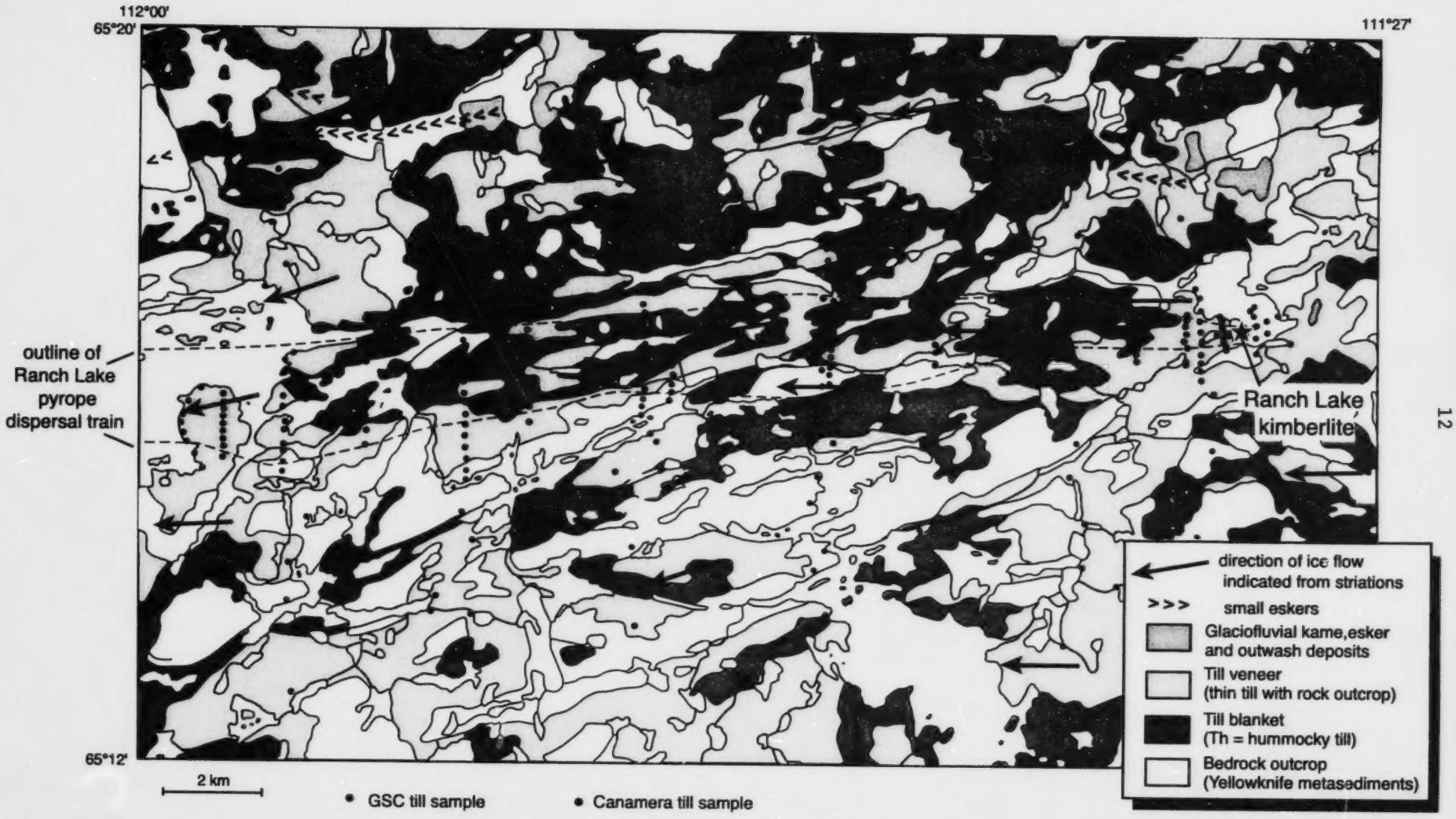


Figure 5. Surficial geology and local ice flow patterns for the Ranch Lake area. Also shown are the locations of GSC (black dots) and Canamera (red dots) till sample sites and the outline of the pyrope dispersal train (dashed lines) defined by Canamera till samples.

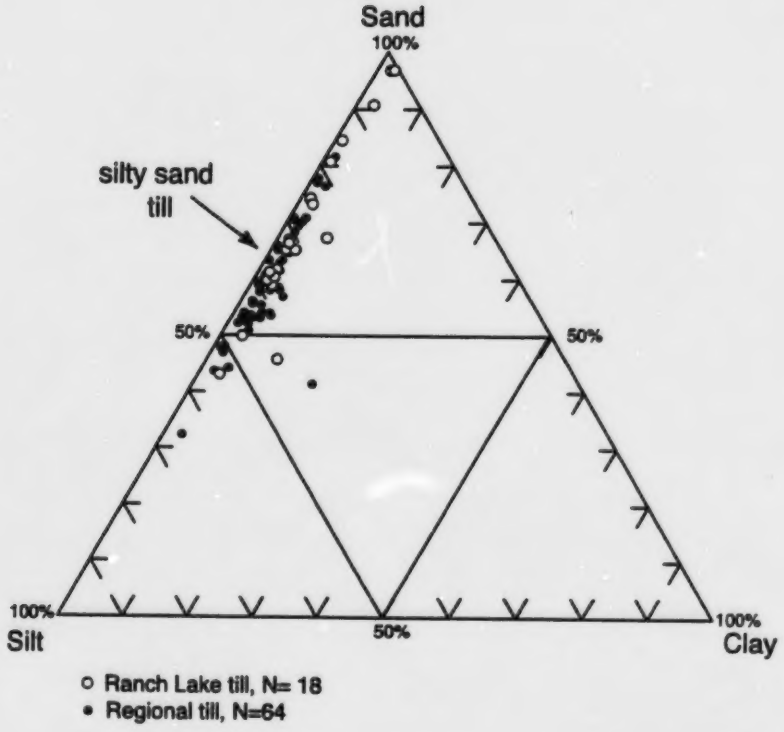


Figure 6. Ternary diagram of grain size distribution (% sand, silt and clay) of regional GSC till samples (solid circles) and till samples collected around the Ranch Lake kimberlite (open circles).

Isolated beaches and wave-cut terraces throughout the area indicate that lake levels were higher than present during and immediately after deglaciation. These features are best developed around Contwoyto Lake and Fry Inlet, and occur up to 35 m above present lake level. Glaciolacustrine deposits such as sand blankets are rare, although extensive areas of organic deposits in low-lying areas around other lakes could be underlain by fine glaciolacustrine sediments. Within glacial lake basins the main surface deposit is till that has been winnowed, and consequently has a very sandy matrix. Stream deposits (alluvium), the sample media not commonly used to explore for diamonds in non-glaciated terrains (e.g. Mosig, 1980; Atkinson, 1989), are rare in the Contwoyto Lake area because the relief is low, and no large rivers flow through the area.

Nature of deposits – Ranch Lake

The surficial material immediately around Ranch Lake (Fig. 5) consists of till veneers (Photo 3a) and blankets and exposed bedrock (Photo 3b) (Ward et al., 1996a, 1997a). Some GSC samples were collected in areas mapped as bare bedrock because small patches of till are present in hollows in these areas. Locally-derived till is a grey, silty sand with a low clay content (Fig. 6).

Glacial history

The area lies within the central part of the Keewatin Sector of the Laurentide Ice Sheet (Dyke and Prest, 1987; Dyke and Dredge, 1989), west of the M'Clintock Ice Divide, which was prominent during the Late Wisconsinan glacial maximum (18 000 to 13 000 BP). At its maximum, the northern margin of the Ice Sheet extended north of the Arctic coast and as far west as Mackenzie Valley. Radiocarbon dates on marine shells north of the Contwoyto Lake area suggest that the ice margin lay near the present coast of Coronation Gulf about 10 000 year ago. A radiocarbon date from twigs in an esker on hummocky till terrain southeast of the Contwoyto Lake area suggests that most of the region was deglaciated by about 8500 BP (TO-4241; Dredge et al., 1996a), although there may have been a late ice remnant in the area of hummocky till. A glacial lake developed in the Contwoyto Lake basin as the ice receded. The actual mechanism of damming is unclear: it could have been by isostatic depression, or by stagnant ice and ponding of meltwater. The range of lake levels, indicated by the elevation of beaches from 10 to 40 m above the present lake, points to a gradual reduction in lake level (Kerr et al., 1998).

Ice flow patterns

Directions and sequences of ice flow and glacial transport of sediments were determined by the relative age of striations, the orientation of glacially molded till and bedrock forms, and the orientation of eskers. Striations in the Contwoyto Lake region (Fig. 4) indicate ice flowed initially to the southwest (Ward et al., 1996a). Cross-cutting striations and streamlined rock forms indicate that ice then flowed towards the west and finally, towards the southwest and northwest at the end of glaciation. Striations close to Ranch Lake (Fig. 5) and the westward orientation of the indicator mineral dispersal train (Fig. 5) indicate that westward ice flow was the most dominant.

Photo 3a. Glacially eroded bedrock overlain by till veneer and abundant erratic boulders between GSC sample sites 3183 and 3184, approximately 9 km down -ice (west) of Ranch Lake.

Photo 3b. Topography typical of the Ranch Lake area: foreground is typical of regions mapped as bedrock, where till sampling is still possible in areas of bedrock lows; background is typical of areas covered by till veneer. View is looking south-southwest, 6 to 9 km down ice (west) of Ranch Lake.

Scattered occurrences of the younger southwestward oriented striations suggest the later southwestward flow also may have affected the area.

METHODS

Sample collection

GSC till samples were collected from the Ranch Lake area in the summer of 1994. GSC sample locations were chosen based on the indicator mineral abundance data provided by Canamera (Fig. 5). Two sets of GSC samples were collected by B. Ward within the first 21 km of the dispersal train, as well as a few samples up-ice:

1) Samples weighing 2 to 3 kg were collected from 108 sites for geochemical analysis of the <0.002 mm and <0.063 mm fractions (samples 3100 to 3209). Samples for geochemical analysis were collected 50 to 250 m apart along 10 north-south oriented lines which were 1 to 3 km in total length, with the sample lines spaced one to four km apart (Appendix A Map 1). Spacing between samples along individual lines and between lines increases with increasing distance down-ice (west) to accommodate the widening dispersal train as defined by Canamera. Samples also were collected up-ice (east) of the kimberlite pipe to determine background concentrations of elements. No till sample was collected from GSC site 3173.

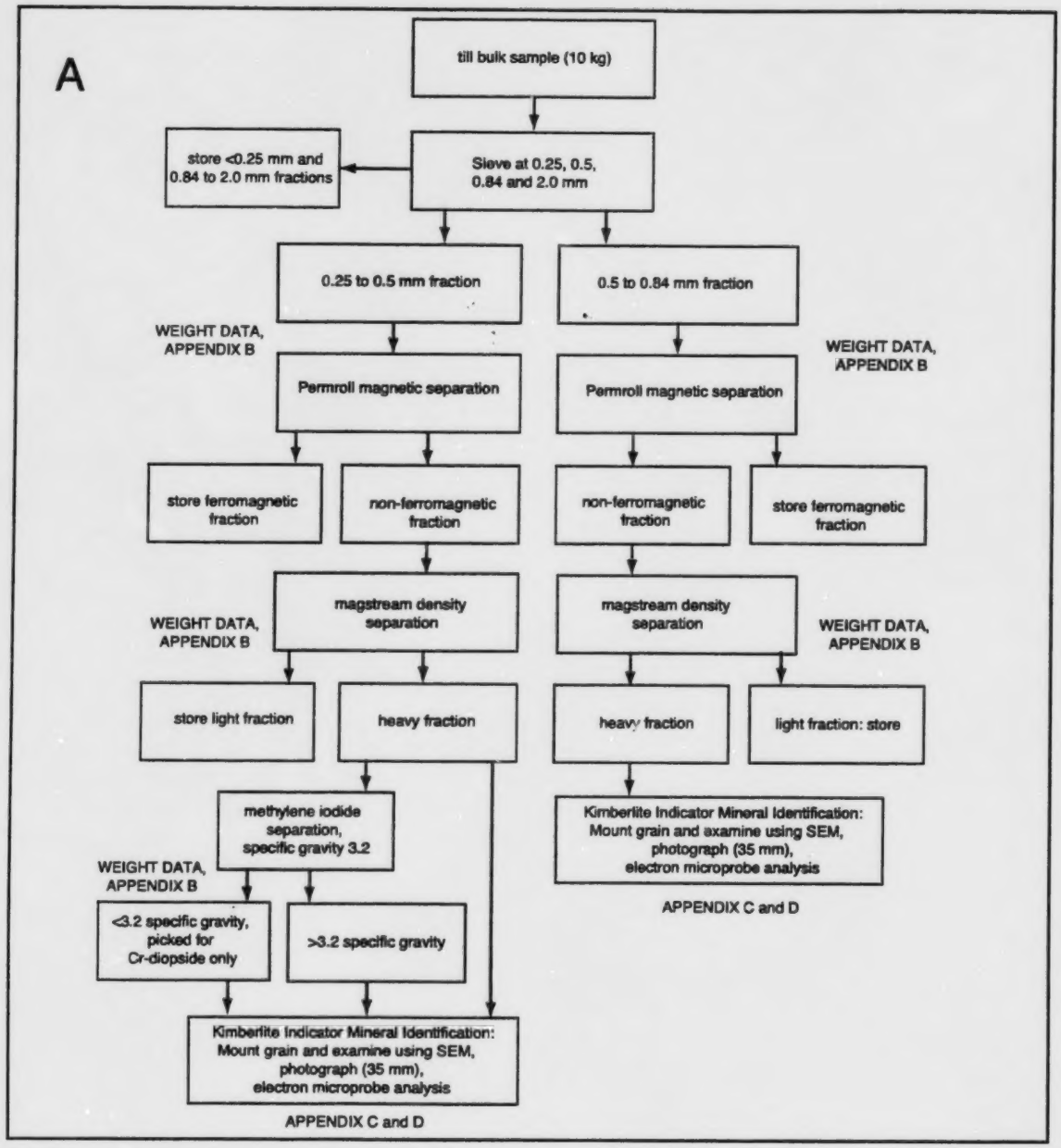
2) Samples weighing 10 kg were collected from 45 sites for kimberlite indicator mineral studies. These till samples were collected from the middle of each north-south sample line and along two of the north-south transects at 0.1 and 4 km down-ice (Appendix A Map 2) to confirm the location of the dispersal train. Sample sites were selected using 1:10,000 scale maps to accurately locate sample positions in relation to Canamera sample sites.

The preferred sampling site for till was shallow (20 to 80 cm depth), hand-dug pits in mudboils, i.e. within the active layer. Mud boils form through the build-up of cryostatic pressure above the permafrost surface and its subsequent release by upward movement of wet, fine sediment which is released at surface during the thaw (summer) season (Shilts, 1972, 1977; Klassen, 1995; Batterson, 1989; McMartin and McClenaghan, 1999). Till samples were shipped directly to Ottawa with no preconcentration in the field. Field data for till samples sites, including UTM coordinates, sediment type, clast concentration, sample type, depth, type of exposure and degree of oxidation, are listed in Appendix A.1.

Canamera Geological Ltd. provided one sample of Ranch Lake kimberlite (sample 3215) from diamond drill core collected in 1993 for petrographic examination, indicator mineral studies and geochemical analysis.

Sample processing

Till samples for geochemical analysis were prepared at the GSC Sedimentology Laboratory, Ottawa, Ontario. One split was centrifuged and decanted (Fig. 7) to obtain the clay-sized (<0.002 mm) fraction. A second split was dry sieved using stainless steel sieves to recover the <0.063 mm (silt+clay fraction).



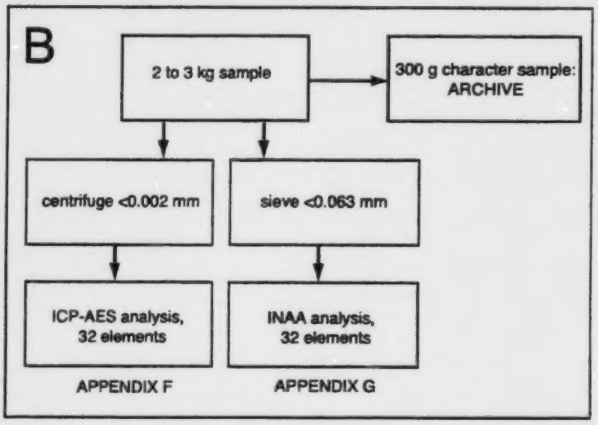


Figure 7. Sample processing flow sheet for GSC till samples: A) recovery of kimberlite indicator minerals and B) geochemical analysis of fine fractions.

GSC bulk till (10 to 15 kg) samples were processed by the Canamera lab in North Vancouver, B.C. (Fig. 7) using the same methods used by Canamera for their till samples. They wet-sieved a 10 kg split of each bulk sample to obtain the 0.25 to 0.50 mm (-34+60 mesh) and 0.5 to 0.84 mm (-20+34 mesh) fractions. The <0.25 mm and the >0.84 mm fractions were stored for future studies. The 0.25 to 0.5 and 0.5 to 0.84 mm fractions were then separated into ferromagnetic and non-ferromagnetic fractions using a permroll separator. The non-magnetic fractions were next separated into light and heavy fractions using a Magstream™ separator. The non-ferromagnetic heavy splits of the 0.25 to 0.5 and 0.5 to 0.84 mm fractions were subsequently examined for indicator minerals. Sample processing weights for both the 0.25 to 0.50 mm and 0.5 to 0.84 mm fractions are listed in Appendix B.1.

The abundance of mica and hornblende made picking of the 0.25 to 0.50 mm non-magnetic heavy mineral fraction of the first few samples very time consuming. To reduce sample volume and increase speed of indicator mineral picking, the 0.25 to 0.50 mm heavy mineral fraction of the remaining 29 heavy mineral concentrates were further processed by Diamond Indicator Processing Inc., Thunder Bay, Ontario using heavy liquid separation (methylene iodide diluted with acetone to 3.2 specific gravity (S.G.)). Weight of samples splits before and after heavy liquid separation are listed in Appendix B.2. The >3.2 S.G. fraction was then picked for all kimberlite indicator minerals and the <3.2 S.G. fraction was picked only for Cr-diopside. The 0.5 to 0.84 mm fraction was not put through heavy liquid separation.

A heavy mineral concentrate was prepared from the Ranch Lake kimberlite sample by first soaking the sample in dilute hydrochloric acid and then repeatedly wetting and drying the sample with distilled water. The resultant disaggregated sample (1 kg) was sent to Overburden Drilling Management Ltd. Nepean, Ontario for concentration of heavy minerals by using heavy liquid separation (methylene iodide diluted with acetone; S.G. 3.2). The material was then sieved into three size fractions for indicator mineral picking: 1) 0.25 to 0.5 mm, 2) 0.5 to 1.0 mm, and 3) 1.0 to 2.0 mm. Note that these three size fractions prepared for indicator mineral picking are slightly different from those prepared for the till.

Indicator mineral picking

Indicator minerals were picked from kimberlite and till samples by I. & M. Morrison Geological Services, Delta, B.C. Minerals picked included pyrope garnet, pyrope-grossular (eclogitic) garnet, Cr-diopside, Mg-ilmenite, chromite and olivine. Because of difficulty in differentiating between chromite and Mg-ilmenite, these two minerals were counted together. Except for 6 samples, the entire 0.25 to 0.5 mm non-ferromagnetic heavy mineral fraction was examined to determine the abundance of indicator minerals. For six samples (indicated by * in Table 1), only a portion of the non-ferromagnetic heavy mineral fraction was examined because of the large concentrate volume. The 0.5 to 0.84 mm fraction of till samples was also examined. All three size fractions (0.25 to 0.5 mm, 0.5 to 1.0 mm, 1.0 to 2.0 mm) of the heavy mineral fraction of the Ranch Lake kimberlite were picked for indicator minerals.

Table 1. Number of grains picked, probed, and confirmed as indicator minerals and the total number of grains normalized to the entire sample.

SAMPLE	INDICATOR MINERALS																				Ratio
	Pyrope				Eclogitic garnet				Mg-ilmenite/Chromite						Cr- and HiCr-diospide						
	picked	probed	confirmed	normalized	picked	probed	confirmed	normalized	picked	probed	ilm confirmed	chr confirmed	ilm normalized	chr normalized	picked	float fraction	probed	confirmed	normalized		Cr-diopside/ pyrope
0.25 to 0.5 mm fraction till																					
94BCW3100	0	0	0	0	1	1	0	0	2	2	0	0	0	0	0	--	0	0	0		
94BCW3101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	--	8	8	8		
94BCW3102	71	68	66	69	1	1	0	0	9	8	0	2	0	2	61	--	60	58	59		0.9
94BCW3103*	9	9	9	30	0	0	0	0	2	2	0	0	0	0	17	--	17	17	56		1.9
94BCW3104*	15	15	15	52	0	0	0	0	4	4	0	0	0	1	21	--	21	20	70		1.3
94BCW3105*	25	25	25	78	0	0	0	0	1	1	0	0	0	0	50	--	49	48	153		2.0
94BCW3106*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1?	--	1	0	0		
94BCW3107*	1	1	1	2	0	0	0	0	0	0	0	0	0	0	5	--	5	5	8		4.0
94BCW3108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3109	0	0	0	0	0	0	0	0	3	3	0	0	0	0	1	--	1	1	1		
94BCW3110	0	0	0	0	1	0	0	0	5	0	0	0	0	1	0	1	0	0	1		
94BCW3111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3112	0	0	0	0	0	0	0	0	3	3	0	0	0	0	1	1	1	1	2		
94BCW3113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3114	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0		
94BCW3115	1?	1	0	0	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0		
94BCW3120*	135	62	62	134	3	2	0	0	0	0	0	0	0	0	162	--	87	87	160		1.2
94BCW3129	263	142	142	262	3	3	0	0	5	5	0	3	0	3	315	--	121	119	304		1.2
94BCW3138	146	100	100	146	10	10	0	0	2	2	0	1	0	1	217	--	116	115	211		1.4
94BCW3147	58	53	52	57	6	6	0	0	2	2	0	1	0	1	70	--	59	59	69		1.2
94BCW3156	105	60	59	104	2	2	0	0	4	4	0	0	0	0	175	--	60	60	170		1.6
94BCW3161	8	8	6	6	0	0	0	0	40	40	0	0	0	0	1	10	1	1	11		1.8
94BCW3166	66	61	60	65	5	5	0	0	44	36	0	5	0	6	15	69	15	15	81		1.2
94BCW3171	0	0	0	0	6	6	0	0	6	6	0	0	0	0	1	0	1	0	0		
94BCW3172	1	1	1	1	0	0	0	0	7	7	0	1	0	1	4	0	4	1	1		1.0
94BCW3178	106	64	63	105	0	0	0	0	108	60	0	7	1	14	21	65	20	13	76		0.7
94BCW3187	251	112	112	249	0	0	0	0	29	29	2	14	2	14	83	116	60	59	182		0.7
94BCW3192	163	98	96	160	1	1	0	0	28	28	1	6	1	6	57	80	56	55	132		0.8
94BCW3193	120	0	0	119	2	0	0	0	55	0	0	0	0	8	28	442	0	0	448		3.8
94BCW3194	146	96	97	147	3	3	0	0	63	53	1	5	1	6	66	108	45	42	165		1.1
94BCW3195	73	49	49	72	1	1	0	0	16	16	0	4	0	4	30	86	30	30	112		1.6
94BCW3196	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	1	1		
94BCW3197	0	0	0	0	1	0	0	0	10	0	0	0	0	1	0	0	0	0	0		
94BCW3198	0	0	0	0	0	0	0	0	5	0	0	0	0	1	1?	0	1	0	0		
94BCW3199	1	1	1	1	0	0	0	0	11	0	0	0	0	2	6	0	6	1	1		1.0
94BCW3200	39	36	36	39	4	4	0	0	14	14	1	2	1	2	5	66	5	5	68		1.7
94BCW3201	10	10	10	10	1	1	0	0	14	14	0	3	0	3	3	24	3	2	26		2.6
94BCW3202	1	1	1	1	0	0	0	0	16	16	0	0	0	0	1	0	1	1	1		1.0
94BCW3203	1	1	1	1	0	0	0	0	10	10	0	1	0	1	1	2	1	0	2		2.0
94BCW3204	0	0	0	0	0	0	0	0	5	5	0	0	0	0	3	0	3	2	2		
94BCW3205	643	171	169	637	7	7	0	0	118	58	2	18	3	27	56	773	30	27	779		1.2
94BCW3206	62	52	52	62	0	0	0	0	20	20	0	1	0	1	8	61	8	8	66		1.1
94BCW3207	190	73	73	188	7	7	0	0	61	50	2	6	2	8	17	149	17	13	155		0.8
94BCW3208	155	73	74	154	0	0	0	0	35	32	0	3	0	3	20	173	17	15	183		1.2
94BCW3209	68	48	47	67	2	2	0	0	16	16	0	3	0	3	12	100	12	10	105		1.6

Table 1. Number of grains picked, probed, and confirmed as indicator minerals and the total number of grains normalized to the entire sample.

SAMPLE	INDICATOR MINERALS																				Ratio
	Pyrope				Eclogitic garnet				Mg-ilmenite/Chromite						Cr- and HiCr-diospide						
	picked	probed	confirmed	normalized	picked	probed	confirmed	normalized	picked	probed	ilm confirmed	chr confirmed	ilm normalized	chr normalized	picked	float fraction	probed	confirmed	normalized		Cr-diopside/ pyrope
0.5 to 0.84 mm fraction till																					
94BCW3100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3101	1	1	1	1	2	1	0	0	0	0	0	0	0	0	2	--	2	2	2		2.0
94BCW3102	9	8	8	9	0	0	0	0	0	0	0	0	0	0	23	--	14	14	23		2.6
94BCW3103	4	4	4	4	1	1	0	0	0	0	0	0	0	0	10	--	10	10	10		2.5
94BCW3104	14	9	9	14	0	0	0	0	0	0	0	0	0	0	13	--	12	12	13		0.9
94BCW3105	8	6	6	8	5	5	0	0	0	0	0	0	0	0	22	--	12	12	22		2.8
94BCW3106	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3107	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	--	1	1	1		1.0
94BCW3108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3114	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3115	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3120	51	30	30	51	3	3	0	0	2	2	1	1	1	1	83	--	47	45	83		1.6
94BCW3129	25	16	16	25	3	3	0	0	0	0	0	0	0	0	47	--	27	27	47		1.9
94BCW3138	16	12	12	16	5	5	0	0	0	0	0	0	0	0	33	--	15	14	33		2.1
94BCW3147	8	6	6	8	0	0	0	0	1	1	1	0	1	0	9	--	9	9	9		1.1
94BCW3156	26	14	13	26	1	0	0	0	1	1	1	0	1	0	39	--	24	24	39		1.5
94BCW3161	1	1	1	1	3	0	0	0	0	0	0	0	0	0	0	--	0	0	0		0.0
94BCW3166	3	3	3	3	1	1	0	0	0	0	0	0	0	0	8	--	8	8	8		2.7
94BCW3171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3172	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	--	0	0	0		
94BCW3178	4	4	4	4	0	0	0	0	0	0	0	0	0	0	10	--	10	10	10		2.5
94BCW3187	7	4	4	7	1	1	0	0	1	1	0	1	0	1	25	--	25	25	25		3.6
94BCW3192	19	14	13	19	0	0	0	0	0	0	0	0	0	0	18	--	18	18	18		0.9
94BCW3193	68	43	45	68	2	2	0	0	4	3	0	3	0	3	109	--	59	59	109		1.6
94BCW3194	22	16	17	22	3	3	0	0	0	0	0	0	0	0	37	--	36	36	37		1.7
94BCW3195	24	21	20	24	6	2	0	0	0	0	0	0	0	0	23	--	13	12	23		1.0
94BCW3196	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	--	0	0	0		0.0
94BCW3197	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	--	0	0	0		
94BCW3198	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3199	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3200	6	4	4	6	5	3	0	0	0	0	0	0	0	0	16	--	9	9	16		2.7
94BCW3201	2	2	2	2	3	2	0	0	0	0	0	0	0	0	3	--	3	3	3		1.5
94BCW3202	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3203	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3204	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	--	0	0	0		
94BCW3205	108	58	58	108	2	2	0	0	6	6	0	4	0	4	149	--	80	80	148		1.4
94BCW3206	6	6	6	6	3	3	0	0	1	1	0	0	0	0	10	--	10	10	10		1.7
94BCW3207	19	16	16	20	3	3	0	0	2	0	0	0	0	1	31	--	19	18	31		1.6
94BCW3208	12	11	11	12	5	5	0	0	1	1	0	0	0	0	23	--	13	13	23		1.9
94BCW3209	1	0	1	2	4	4	0	0	1	1	0	0	0	0	5	--	5	5	5		2.5

Table 1. Number of grains picked, probed, and confirmed as indicator minerals and the total number of grains normalized to the entire sample.

SAMPLE	INDICATOR MINERALS																		Ratio
	Pyrope				Eclogitic garnet				Mg-ilmenite/Chromite						Cr- and HiCr-diospide					
	picked	probed	confirmed	normalized	picked	probed	confirmed	normalized	picked	probed	ilm confirmed	chr confirmed	ilm normalized	chr normalized	picked	float fraction	probed	confirmed	normalized	Cr-diopside/ pyrope
Kimberlite Sample 94BCW3215 (500 g sample)																				
0.25 to 0.5 mm	675	75	75	669	7	7	0	0	19	19	1	18	1	18	900	--	32	32	900	1.3
0.5 to 0.84 mm	225	66	66	223	0	0	0	0	16	16	9	7	9	7	458	--	16	11	315	1.4
0.84 to 2.00 mm	134	15	15	133	0	0	0	0	7	7	5	2	5	2	158	--	5	3	95	0.7

* = only a portion of non-mag heavy mineral fraction picked, raw counts normalized to total weight of non-mag heavy mineral fraction (see Appendix B.2 for weight data)

picked= number of grains picked
probed= number of picked grains that werer probed
confirmed = number of probe grains that were positivey identified as being what they were picked as
normalized = total number of grains in samples multiplies by success ratio in Table 2

Electron microprobe analysis

For samples with very high abundance of indicator minerals, a subset of picked grains was selected for analysis; the number of grains analyzed is listed in Table 1. Grains were mounted in 25 mm cylindrical epoxy mounts and polished by Lakefield Research, Lakefield, Ontario. The grains were analyzed at the Geological Survey of Canada Microbeam laboratory using a four spectrometer wavelength dispersive Cameca SX50 electron microprobe using methods described by Stirling and Pringle (1996). The raw data were processed with the Cameca PAP program (Pouchou and Pichoir, 1984). Grains were analyzed in batches of 6 mounts, which usually contained around 700 grains, using automated runs of approximately 24 hours. The dead time correction formula (Willis, 1993) has been changed for this SX50 to achieve linearity at higher count rates. The grains were analyzed using the "SILPYROX" routine (Stirling and Pringle, 1996). This routine was developed by the Geological Survey of Canada in order to analyze the major elements required to identify the potential mineral species to be encountered in this study using a minimum of probe time. The standards and operating conditions are given in Table C.1 (Appendix C). The calculated detection limits and counting times are given in Table C.2 (Appendix C).

Mineral identification

The analyzed grains were classified on the basis of their chemical composition. Theoretical chemical compositions of mineral endmembers (LeMaitre, 1982, Table A13) were used to calculate cut-off values (at approximately 50:50 mol %) for members of binary solid solution series. These cut-off values are shown in the table below. For analyses with low totals and for minerals that contain substantial amounts of more than two endmembers (which is the case for most garnets and spinels), these values were lowered accordingly. In equivocal cases molar fractions of the critical oxides were calculated in order to assess the endmember with the highest percentage, after which the mineral would subsequently be named.

Table 2. Mineral classification criteria.

	Criteria	Mineral name
Al-garnet	> 21 wt.% MnO =	Spessartine
Al-garnet	> 13 wt.% MgO =	Pyrope
Al-garnet	> 17 wt.% CaO =	Grossular
Garnet	< 11 wt.% Al_2O_3 & >13 wt.% CaO =	Andradite
Garnet	> 15 wt.% Cr_2O_3 &>17 wt.% CaO =	Uvarovite
Andradite	> 2 wt.% Cr_2O_3 =	Cr-Andradite
Andradite	> 5 wt.% MgO =	serpentinized (Cr-)Andradite
Pyrope	> 2 wt.% Cr_2O_3 =	Cr-Pyrope
Diopside	>0.5 wt.% Cr_2O_3 =	Cr-Diopside
Cr-Diopside	> 1.5 wt.% Cr_2O_3 =	HiCr-Diopside
Chromite	Cr_2O_3/Al_2O_3 < 1.5 =	Cr-Spinel
Chromite	> 3 wt.% TiO_2 =	Ti-Chromite
Rutile	> 15 wt.% FeO_{tot} =	Fe-Rutile
Ilmenite	> 4 wt.% MgO =	Mg-Ilmenite
Ilmenite	> 53 wt.% FeO_{tot} =	Ilmenite (altered)
Ilmenite	< 30 wt.% TiO_2 =	FeTi-Oxide
Pyrope-almandine -grossular	<22 wt.% FeO &> 4 wt.%CaO&>5wt% MgO & > 0.07 wt.% Na=	Group 1 garnet eclogite
Olivine	Mg-number (mol%forsterite) >84	forsteritic olivine

In addition, prefixes were added to some of the indicator minerals to highlight elevated contents of petrogenetically critical elements such as Mg, Cr, and Ti. Cutoff values for these prefixes (given in the table) were chosen arbitrarily and might differ from those used by other authors. For instance, Cr-diopside was defined at >0.5 wt.% Cr_2O_3 while other authors have used a 1.0 wt.% Cr_2O_3 cutoff (e.g. Ward et al., 1995; McClenaghan et al., 1993). Readers are encouraged to reclassify the mineral chemistry data according to their own criteria.

Enlarged color prints as well as SEM backscatter images of the grain mounts were used to aid mineral identification and to recognize possible inhomogeneities, intergrowths or exsolutions within individual grains. Additional information on the mineral grains (color, specific gravity, magnetic susceptibility) were used to improve or confirm identification. Problems identifying and labeling the minerals were the result of low totals caused by insufficient grain outcrop at the surface of the polished mount, inhomogeneities, intergrowths or exsolutions within the grain, or the presence of elements in the mineral not analyzed by the microprobe routine (e.g. REE, S). In most cases, minerals could still be identified in spite of low totals. Microprobe data are listed in the following appendixes:

Appendix C.1 Microprobe data for all mineral grains (on diskette)
Appendix C.2 Microprobe data for pyrope
Appendix C.3 Microprobe data for diopside
Appendix C.4 Microprobe data for chromite
Appendix C.5 Microprobe data for ilmenite
Appendix C.6 Microprobe data for olivine

Since 10 kg of each till sample were processed to recover indicator minerals, no normalization to accommodate for variable sample weight is necessary. Normalization was necessary for those till samples for which not all picked indicator minerals were probed because of the large number of grains. For those indicator minerals that were microprobed, the number of picked (visually identified) indicator minerals were compared to the number of confirmed (based on mineral chemistry results) indicator minerals to calculate a "success" ratio (Table 3). The number of unprobed minerals for each of the five mineral species (listed in Table 1) was multiplied by this percentage and added to the total number of grains confirmed by microprobe analysis.

Table 3. Visual selection success ratio for indicator minerals picked from till samples.

Mineral	**0.25 to 0.5 mm (-34+60 mesh)**	**0.5-0.84 mm (-20+34 mesh)**
Pyrope	99.1%	99.7%
Mg-Ilmenite	1.3%	17.6%
Chromite	14.2%	52.9%
Cr-diopside	95.3%	99.0%
Olivine	64.6%	53.4%

Pyrope surface features and textures

The number of pyrope grains that exhibited kelyphite rims, kelyphite along internal fractures or pitted surfaces (orange peel texture) was noted by I. &M. Morrison Geological Services during their picking of kimberlite indicator minerals. The raw counts and counts as a percentage of the total number of pyrope grains are listed in Appendix D.

Kimberlite geochemistry

A 40 g split of Ranch Lake kimberlite (BCW94-RL) was crushed and analyzed for whole rock major and trace element geochemistry by the Analytical Chemistry Laboratory of the Geological Survey of Canada, Ottawa. Major oxides and Ba and Sr were determined by X-ray fluorescence (XRF) on a fused glass disc. H_2O_{total}, CO_{2total}, and S_{total} were determined by gravimetric and LECO methods and FeO by wet chemistry. A split of the sample was digested in nitric, perchloric and hydrofluoric acids followed by a lithium metaborate fusion of any residual material for the determination of trace elements by inductively coupled plasma-emission spectrometry (ICP-ES) and inductively coupled plasma-mass spectrometry (ICP-MS). Additional trace element analyses using Instrumental Neutron Activation Analysis (INAA) were performed by X-Ray Assay Labs, Don Mills, Ontario. A second kimberlite sample from Ranch Lake (KIA93-RL) was analyzed at Memorial University, Newfoundland. Major elements were determined by XRF, and trace elements by ICP-MS. The results for both samples are listed in Appendix E.

Till geochemistry

The <0.002 mm fraction was analyzed for trace, minor and major elements at Chemex Labs, Mississauga, Ontario by ICP-ES following a digestion in aqua regia. This digestion may be incomplete for Al, Ba, Be, Ca, Cr, Ga, La, Mg, K, Sc, Na, Sr, Th, Ti, and W. Lower detection limits for this method are listed in Table F1 in Appendix F. Values for Ag, Bi, Cd, Hg, Sb, Tl, U and W were at or near their lower detection limits and therefore, are not included in this report. Geochemical data for GSC till samples are listed in Appendix F.1

Analytical quality control of the <0.002 mm fraction was monitored by analyzing 14 duplicate till samples prepared from splits of the <0.002 mm fraction and by analyzing GSC in-house standards (Appendix F.2). Examination of the duplicate sample data reveals fairly good precision (±10 to 15%) for most elements analyzed. Some As values vary up to 40% and Pb also displays some larger fluctuations. Comparison of the three analyses of GSC standard TCA8010 to the mean values for elements of 19 previous analyses reveals good accuracy for all elements.

Approximately 30 g aliquots of the <0.063 mm fraction of the till samples were analyzed by Activation Laboratories Ltd., Ancaster, Ontario using INAA. This method is particularly sensitive for rare earth elements (La, Ce, Nd, Sm, Eu, Tb, Yb, and Lu), as well as for Sc, Co, Cr, Cs, Hf, Ta, Th, U, and Au. Detection limits for this method are listed in Table G.1 (Appendix G) and the data for till samples are listed in Appendix G.1. Values for Ag, Hg, Ir, Mo, Ni, Se, Sn, Sr and W are not included in this report because values were at or

below lower detection limits.

Analytical quality control of the INAA analysis of <0.063 mm fraction was monitored by analyzing 20 duplicate till samples and by analyzing four GSC in-house standards (Appendix G.2). Examination of the duplicate sample data reveals fairly good precision (±10%) for most elements analyzed. Exceptions to this are Au, As, Ba and Rb. Some Au results vary widely between duplicate analysis, as much as 19 ppb; this is likely caused by the "nugget effect" (c.f. Clifton et al., 1969). Some results for As, Ba, and Rb vary as much as 20%. Comparison of the four analyses GSC standard TCA8010 to the mean values for elements for previous analyses reveals good accuracy for all elements except Ba. Although reproducibility is good for the standard, Ba results for the four analyses are somewhat lower than the reported mean value.

RESULTS

Kimberlite indicator mineral chemistry

Mineral name, chemistry, size, and color of the analyzed grains are listed in Appendix C.1 only on the accompanying CD-ROM. A total of 4341 mineral grains were analyzed, consisting of 2108 garnets (49.0%), 1469 clinopyroxenes (34.1%), 429 ilmenites and their alteration products (hematite, non stoichiometric Fe-Ti-oxides) (10.0%), 126 chromites or chrome spinels (2.9%), 75 olivines (1.7 %), and 93 other grains consisting of clear to pale green enstatite, epidote and serpentine, black rutile, tourmaline, amphibole, magnetite, vesuvianite, plagioclase, biotite, leucoxene and hedenbergite, orange staurolite, blue/green calcite and apatite, and purple quartz (2.2%). As well, at least 31 mineral grains were not analyzed because they were lost from the mount during polishing or subsequent handling, or because an insufficient surface area of the grain was exposed at the surface of the epoxy mount.

Pyrope

Pyrope mineral chemistry, size and color for individual grains are listed in Appendix C.2. Of 2108 garnets identified, 1953 were purple to reddish purple pyropes the remainder were orange eclogitic or crustal almandine-spessartine garnets. Pyrope is chemically characterized by high MgO levels (>13 wt.% MgO) and varying amounts of Cr_2O_3 (up to 15 wt.%). MgO- and Cr_2O_3- rich pyrope garnets are exceedingly rare in upper crustal rocks, being found in alpine peridotites and in mantle xenoliths carried to the surface by kimberlites or, more rarely, alkaline volcanic rocks with deep mantle sources (Deer et al., 1982). Mantle-derived garnets found in kimberlite belong to three major petrogenetically and compositionally different groups: 1) Cr, Ti-pyrope (≤ 4 wt.% Cr_2O_3), generally orange to deep red that belong to the Cr-poor megacryst suite which is thought to be genetically related to kimberlite; 2) pink to purple (rarely green) Ti-poor, Mg- and Cr-rich pyrope from peridotitic xenoliths; and 3) yellow to orange-red pyrope-almandine-grossular garnets from eclogitic xenoliths. Only garnets of the two latter groups have been found associated with diamonds; more specifically: purple subcalcic harzburgitic/dunitic Cr-pyropes and orange Na-bearing pyrope-almandines from group I eclogites (Sobolev, 1977; Sobolev et al., 1973, 1993; Gurney, 1984, 1989; Gurney and Zweistra, 1995; McCandless and Gurney 1989). These garnets are therefore a main

target in diamond exploration. Only their chemical composition distinguishes them from other garnets with similar appearance.

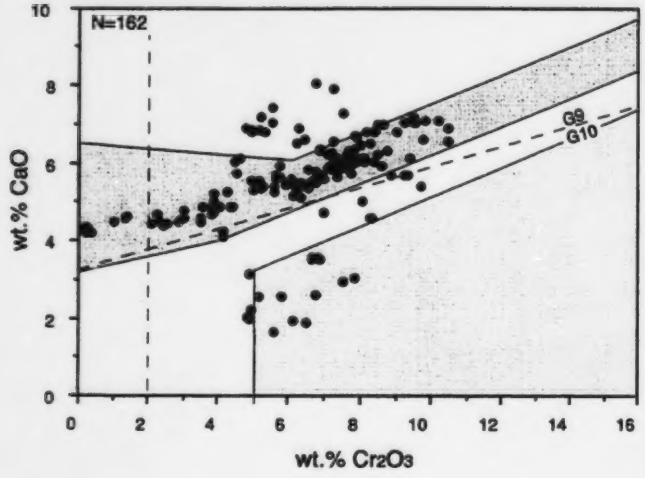
The shaded central band in Figure 8 defines the composition of lherzolitic garnets according to Sobolev et al. (1973, 1993). The diagonal dashed line separating G9 from G10 is the '85% line' as defined by Gurney (1984). Although this line is commonly used to distinguish between lherzolitic (G9) and harzburgitic (G10) garnets it should be kept in mind that it originated from a study of diamond inclusion garnets of which 85% fell below this line (Gurney, 1984). The garnets below the 85% line are low-Ca, Cr-pyropes from harzburgitic or dunitic sources, which are also called "subcalcic" or G10 garnets after the classification by Dawson and Stephens (1975). The shaded area in the lower right part of the plot shows the target field for subcalcic garnets as defined by Sobolev (1971, 1977, 1993) and Sobolev et al. (1973; 1977,1993) which is more restrictive than Gurney's 85% line (eliminating all garnets with Cr_2O_3 <5 wt.%).

Subcalcic or "G10" garnets constitute approximately 15% of the pyropes recovered from the Ranch Lake kimberlite and 8% of the pyropes recovered from the associated glacial sediments (Fig. 8). Most of these subcalcic garnets are particularly CaO-poor (<3 and some even <2 wt.% CaO over a wide range of Cr_2O_3 contents). The presence of subcalcic pyrope indicates that the Ranch Lake kimberlite sampled harzburgite and/or dunite peridotitic mantle en route to the surface. Only seven pyropes from the Ranch Lake kimberlite, and eight pyropes from till contain <2 wt.% Cr_2O_3. This low number of Cr-poor pyropes indicates that most of the pyropes were derived from mantle xenoliths (predominantly lherzolite, with some from harzburgite, dunite and wehrlite), and that Ti-Cr- pyrope of the megacryst suite is rare to absent . The TiO_2 versus Cr_2O_3 plot in Figure 9 reveals a continuous distribution of Ti- and Cr-compositions within the pyrope field. A similar distribution is apparent for pyrope in GSC till samples down-ice of the Ranch kimberlite (Fig. 9b). There is an absence of distinct megacryst (high Ti, low Cr) and peridotite (low Ti, high Cr) garnet populations. This pattern is also observed in the Lac de Gras area, and suggests either that megacrysts are rare to absent in the Lac de Gras kimberlites, or that the megacrysts are unusually Cr-rich and overlap in composition with peridotitic pyrope. Closer examination of the pyrope compositional data reveals that only five out of a total of 1955 garnets analyzed from the Ranch Lake kimberlite and till down-ice show typical megacryst garnet compositions (with low Cr_2O_3, here ≤ 0.51 wt.%) and high TiO_2 (here ≥ 0.71 wt.%). This number is quite low as megacryst may contain up to 4 wt.% Cr_2O_3. Four of these garnets are from the kimberlite (sample 3215) and one is from till (sample 3209). Other TiO_2 rich pyropes (with up to 1.19 wt.% TiO_2) contain fairly high Cr_2O_3 (≥ 4 wt.%) and CaO (≥ 6 wt.%) and are probably from evolved or metasomatized (sheared) lherzolites.

Almandine-spessartine garnet

The orange to red garnets picked as possible eclogitic garnets were mostly of the almandine-spessartine series, showing a continuous spectrum of compositions between the two endmembers. MnO-rich almandines and spessartines are found mainly in pegmatitic and granitic rocks and their metamorphic equivalents (Deer et al., 1982) and are therefore of no interest for kimberlite exploration. They are, however,

a) Ranch Lake kimberlite



b) GSC till, 100 m to 20 km down-ice

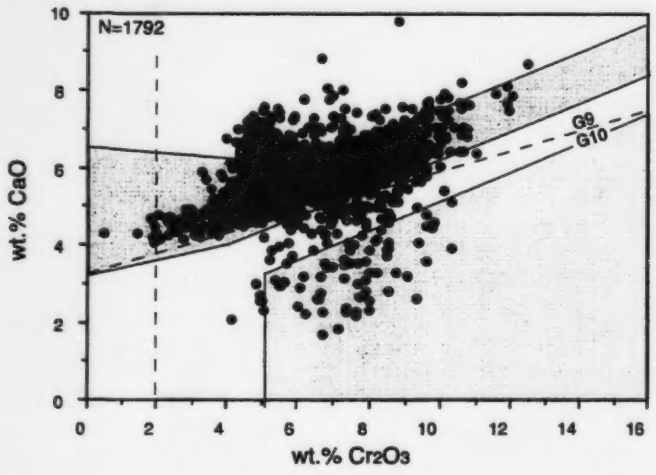
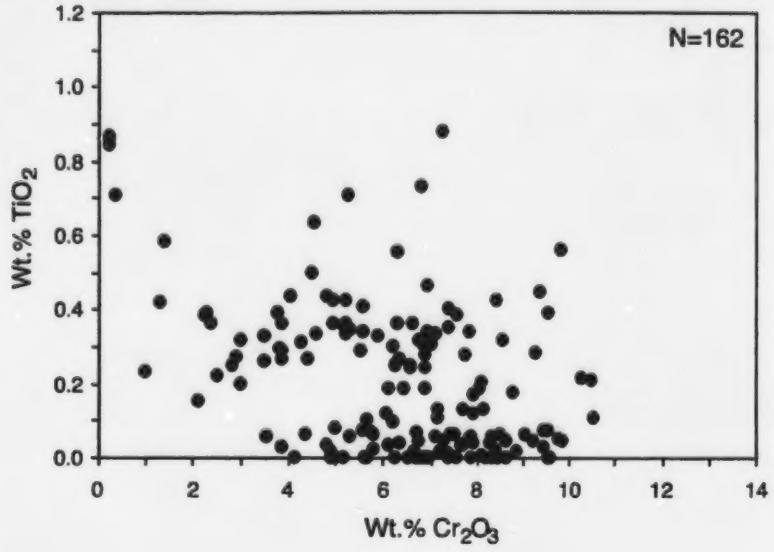


Figure 8. CaO versus Cr_2O_3 content for pyrope from : a) Ranch Lake kimberlite and b) GSC till samples collected between 100 m and 20 km down-ice. Upper shaded area is the field for lherzolite garnets; lower shaded field is the composition of subcalcic garnets from the diamond stability field (Sobolev, 1977, Sobolev et al., 1993). Dashed diagonal line separates G9 and G10 garnets (Gurney, 1984); dashed vertical line is from Fipke et al. (1995).

a) Ranch Lake kimberlite



b) GSC till samples

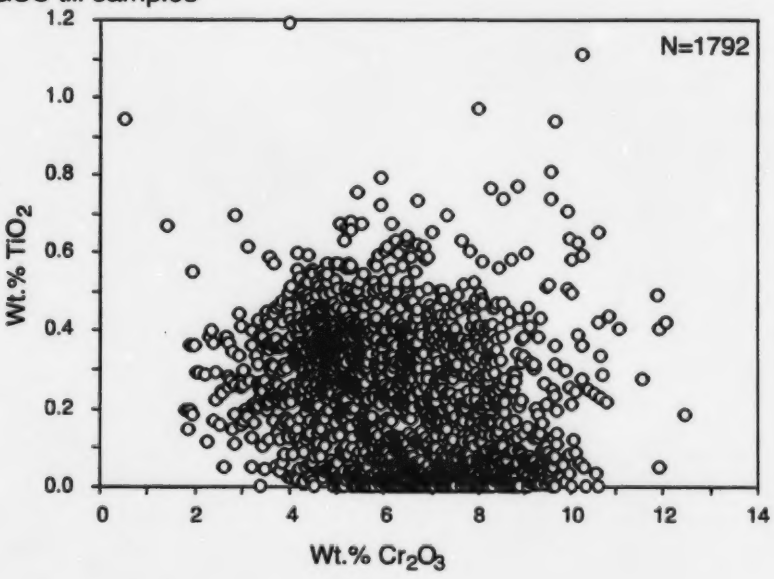


Figure 9. TiO_2 versus Cr_2O_3 for pyropes from: a) Ranch Lake kimberlite, and b) GSC till samples collected down-ice.

similar in appearance to eclogitic garnets, which are characterized by compositions intermediate between pyrope, almandine and grossular, and with minor but diagnostic amounts of Ti and Na (McCandless and Gurney 1989; Schulze, 1999). Eclogitic garnet can be distinguished from crustal almandine in a triangular Mg-Ca-Fe plot (Fipke et al., 1989), and contain <22 wt.% FeO_{tot}. Potential eclogitic garnets would have been identified as Mg-almandines or Fe-pyropes in Appendix C.1, however, none were found in this study.

Grossular and Andradite garnet

Other garnets identified include two pale green grossular and 1 black andradite. They were picked as potential Cr-diopside or ilmenite/chromite, respectively.

Diopside

Mineral chemistry, size and color for individual grains are listed in Appendix C.3. Diopside was the most abundant pyroxene analyzed; of a total of 1518 pyroxenes analyzed, 1467 are diopsides, 50 are enstatite (picked as potential olivines), one is hedenbergite and one is augite. Green Cr-diopside is an important kimberlite indicator mineral, originating from dissaggregated mantle xenoliths (lherzolites and wehrlites) of the peridotite suite, as well as from the megacryst suite. Kimberlites contain diopsides with a wide range of Cr_2O_3 concentrations (up to 6 wt.%, Stephens and Dawson, 1977) which overlap at lower contents of Cr_2O_3 with diopside compositions in other ultrabasic rocks (compare Table 52, Deer et al., 1978). This overlap makes discrimination between kimberlitic and other diopsides on the basis of Cr_2O_3 content difficult. Studies of diopside compositions in till samples from the Kirkland Lake kimberlite field (McClenaghan et al., 1993) have shown that diopsides containing up to 1.4 wt.% Cr_2O_3 can be found in varying abundance in samples that contain no other kimberlite indicator minerals and thus are likely derived from bedrock sources other than kimberlite. Emerald green diopsides with high Cr_2O_3 (≥1.4 wt.%) are found only in mantle derived garnet peridotites and pyroxenites which can occur as xenoliths in ultrabasic magmas with deep mantle sources, (e.g. kimberlites, and some lamproites; Nixon, 1987), and in alpine peridotites and ultramafic intrusions (Deer et al., 1978). Where alpine peridotites or ultramafic layered intrusions are not present, these Cr-diopsides most likely are derived from kimberlite. Diopside from the Ranch Lake kimberlite contains between 0.33 to 3.72 wt.% Cr_2O_3 and GSC till samples down-ice contain between 0.0 to 4.84 wt.% Cr_2O_3.

Diopsides were divided and labelled into three groups based on their Cr_2O_3 content in Appendix C.3: 1) diopside, containing <0.5 wt.% Cr_2O_3 , which can originate in many rock types including kimberlite; 2) Cr-diopside, containing 0.5 to 1.4 wt.% Cr_2O_3, which can be both from kimberlites as well as from regional (ultra)mafic rocks; and 3) HiCr-diopside, containing ≥ 1.4 wt.% Cr_2O_3, which are most likely kimberlitic unless ultrabasic peridotitic bodies are present in the sampled area (which is not the case). The threshold of 0.5 wt.% Cr_2O_3 is arbitrary; some studies use 0.5 wt.% Cr_2O_3 (cf. Fipke et al., 1989; Thorleifson et al., 1994; McClenaghan et al., 1996, 1998) while others use a 1.0 wt.% Cr_2O_3 cutoff (cf. McClenaghan et al., 1993; Ward et al., 1995) to separate

diopside from Cr-diopside. Only 44 out of 1461 diopside grains analyzed from the Ranch Lake area have low Cr_2O_3 contents of <0.5 wt.%, most grains are Cr-diopside (832) and 485 grains are HiCr-diopside containing up to 4.84 wt.% Cr_2O_3. Cr-diopside in Table 1 reported as picked, analyzed, confirmed and normalized represent the total number of Cr- plus HiCr-diopside.

In Ranch Lake kimberlite sample 3215, fifty-two diopsides were analyzed. All diopsides have a relatively restricted range in Mg-number, with Mg/Mg+Fe*100 ranging from 90.9 to 94.8, with variable Cr_2O_3 contents (Fig. 10). The relative proportions of diopside:Cr-diopside:HiCr-diopside is 4:27:69. Diopside from till samples are extremely similar, except that a minor proportion of these grains show lower Mg-numbers from 80.3 to 90.9 (Fig. 10). The three diopside grains in till having Mg/Mg+Fe*100 <81 are suggested to be derived from Mackenzie dykes (based on unpublished microprobe data of W.R.A. Baragar). Diopside with Mg-number between 81 and 91 are problematic as to their origin. They could possibly be kimberlite-derived megacrysts (which were not in the kimberlite concentrate examined in this study), or are from a foreign (mafic/ultramafic) source. Diopside from both kimberlite and till form a tight cluster between Mg-numbers of 92 and 93 and variable Cr_2O_3, these are probably Cr-diopsides from garnet-lherzolite or pyroxenite.

Chromite

Chromite mineral chemistry, size and color for individual grains are listed in Appendix C.4. The total number of chromites picked, analyzed, confirmed and normalized is listed in Table 1. One hundred and twenty-two chromites (including Ti-chromites) and two chrome spinels were identified. These grains have a wide range of chromium contents, varying between 12.2 and 68.3 wt.% Cr_2O_3 in till and between 51.4 and 68.1 wt.% Cr_2O_3 in the kimberlite. Chromite occurs in a variety of basic and ultrabasic rocks, including kimberlite. Similar to Cr-diopside, the Cr_2O_3 content of kimberlitic and non-kimberlitic chromite overlaps.

Chromite can be used to assist in evaluating the diamond potential of a kimberlite. Chromium and magnesium rich (>62.5 wt.% Cr_2O_3, ≥12 to 17 wt.% MgO) magnesio-chromite in kimberlite are considered to be strong indicators of the presence of diamond since they have compositions similar to those found as inclusions in diamonds (Fipke et al., 1989; Fipke et al., 1995; Gurney and Moore, 1993). A Cr_2O_3 versus MgO plot (Fig. 11) shows that chromite in till from the Ranch Lake area are very Cr_2O_3-rich with 40 grains out of 122 containing >62 wt. Cr_2O_3. Five of the chromite grains from the Ranch Lake kimberlite sample and nine chromite grains from till samples (which approach magnesiochromite compositions) plot in the diamond inclusion field. Several other chromite grains from kimberlite and till samples plot in the diamond intergrowth field.

An additional chromite discrimination diagram to assist in diamond potential evaluation is a bivariate plot of Al_2O_3 versus Cr_2O_3 plot (Sobolev et al.,1993). Chromite from the Ranch Lake kimberlite and till (Fig. 12) plot in the compositional field for chromite coexisting with diamonds, however, chromite in till display a wider compositional range

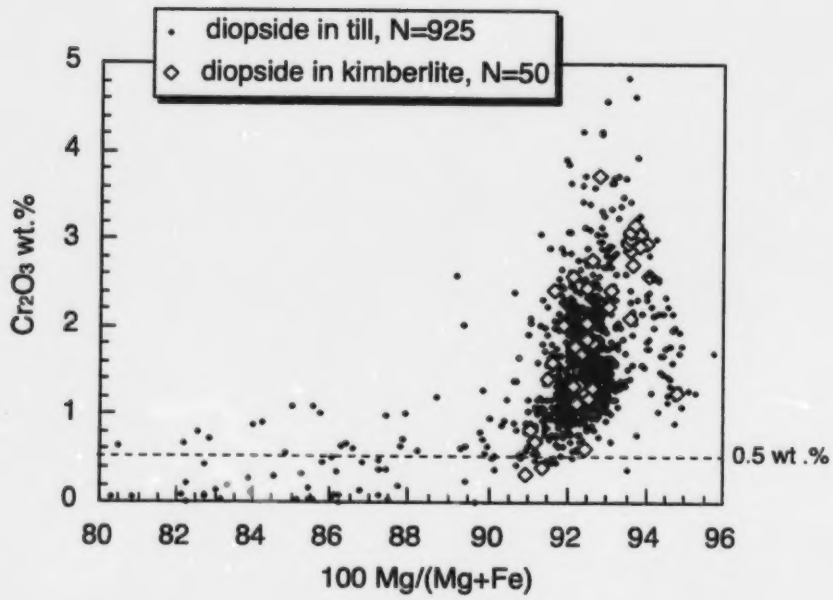
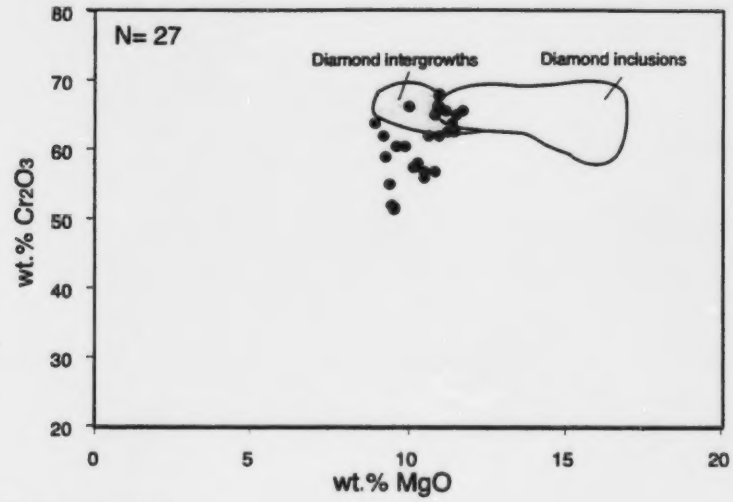


Figure 10. Cr_2O_3 versus Mg-number (100*Mg/Mg+Fe) in Cr-diopside from the Ranch Lake kimberlite and till. The tight cluster of Cr-rich diopside with high Mg-numbers (90.9 to 96) in both kimberlite and till is from peridotitic sources.

a) Ranch Lake kimberlite



b) GSC till samples

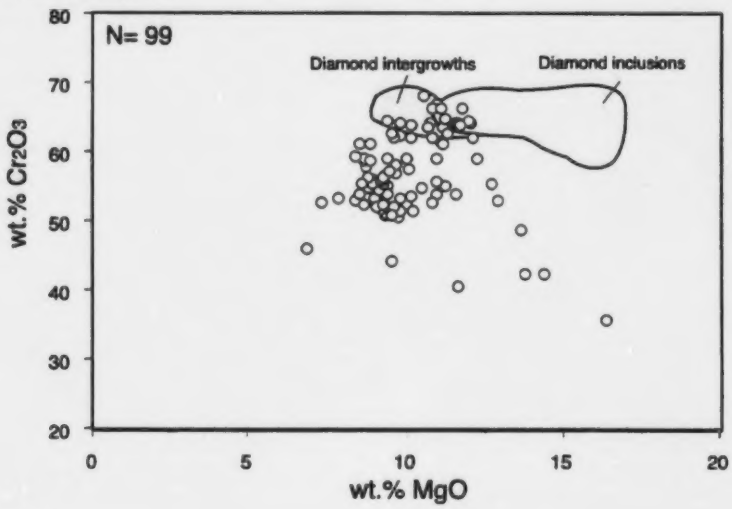


Figure 11. Cr_2O_3 versus MgO content of chromite and Cr-spinel from: a) Ranch Lake kimberlite, and b) GSC till samples down ice. Diamond inclusion and intergrowth fields from Fipke et al.(1995).

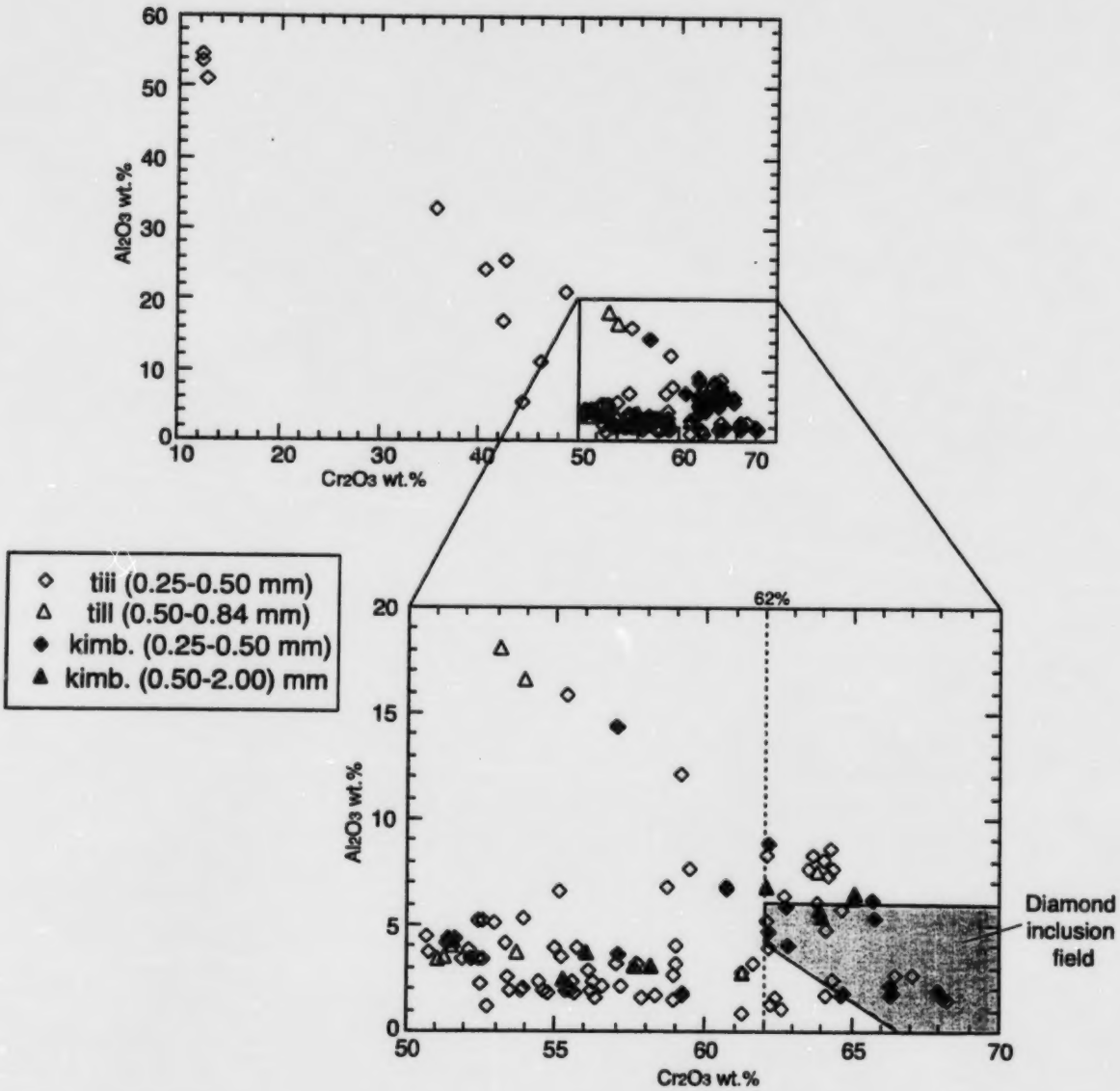


Figure 12. Cr_2O_3 versus Al_2O_3 plot for chromite and Cr-spinel in differnt size fractions of heavy minerals from the Ranch Lake kimberlite and GSC till samles down-ice. Diamond inclusion field and dashed lines from Sobolev (1977) and Sobolev et al.(1973, 1993).

than chromite from the Ranch Lake kimberlite.

Ilmenite

Ilmenite mineral chemistry, size and color for individual grains are listed in Appendix C.5. Mg-rich ilmenite containing ≥4 wt.% MgO (also known as picroilmenites) are characteristic of kimberlite (Mitchell, 1973; Haggerty, 1975). The number of Mg-ilmenites picked, analyzed, confirmed and normalized is listed in Table 1. Of 383 black ilmenite probed, only 29 contain sufficient MgO to be classified as Mg-ilmenite. The Ranch Lake kimberlite sample contains 16 Mg-ilmenite grains and 13 Mg-ilmenite grains were recovered from the 45 till samples. Mg-ilmenite from the Ranch Lake property contain 12 to 18 wt.% MgO (Fig. 13) which is comparatively high even for kimberlitic ilmenite. The scarcity of Mg-ilmenite in Ranch Lake kimberlite is mimicked in the till down-ice from the pipe. The majority (356) of the ilmenite grains in till are "regional" ilmenites from non-kimberlitic sources with MgO contents ranging from 0.0 to 1.55 wt.%. This is not unexpected as the kimberlites in the Lac de Gras cluster appear to contain very little Mg-ilmenite (Ward et al., 1995).

Olivine

In contrast to the other indicator minerals, olivine grains were not systematically picked and counted in the GSC till and kimberlite samples. Instead, 75 olivine grains were picked from kimberlite and till for microprobe analysis to provide an overview of the chemical compositional of olivine present in the Ranch Lake area. The pale green to colorless olivine grains picked from the Ranch Lake samples contain between 47.38 and 52.82 wt.% MgO and 6.97 and 10.23 wt.% FeO which corresponds to Mg-number between 90 and 93. These high forsterite content olivine grains are typical of olivine from kimberlite and peridotitic mantle xenoliths (Mitchell, 1986).

Leucoxene, Hematite and (Ti)-Magnetite

Black or gray Ti-Fe-rich oxides found in this study are mainly interpreted as alteration products of ilmenite. Leucoxene is not a pure mineral but a mixture of Fe- and Ti-rich phases (rutile, titanite and hematite). In this study the name leucoxene is used for non-stoichiometric mixtures of SiO_2, FeO and TiO_2 with minor Al_2O_3 and CaO.

Forty-two black grains consisting essentially of FeO and up to 30 wt.% TiO_2 were tentatively labeled "Ti-magnetite". These grains were picked as potential Mg-ilmenites. Ti-magnetite is a solid solution of magnetite (Fe_2O_4) and ulvöspinel (Fe_2TiO_4). Natural Ti-magnetite, however, contains ≤ 18 wt.% TiO_2 (Deer et al., 1962). The high TiO_2 content and the unknown ratio of FeO/Fe_2O_3 of the grains identified here suggest that they are actually mixtures of ilmenite and hematite and, hence, not true Ti-magnetite but alteration products of ilmenite. Three magnetite grains were picked because they were thought to be ilmenite or chromite grains.

Other Minerals

Other minerals analyzed in this study were picked because they visually resembled kimberlite indicator minerals. Black biotite, plagioclase, vesuvianite, hercynite, tourmaline and rutile were thought to be ilmenite or chromite; purple quartz was thought to be Cr-pyrope; pale green serpentine, epidote and green feldspar were thought to be

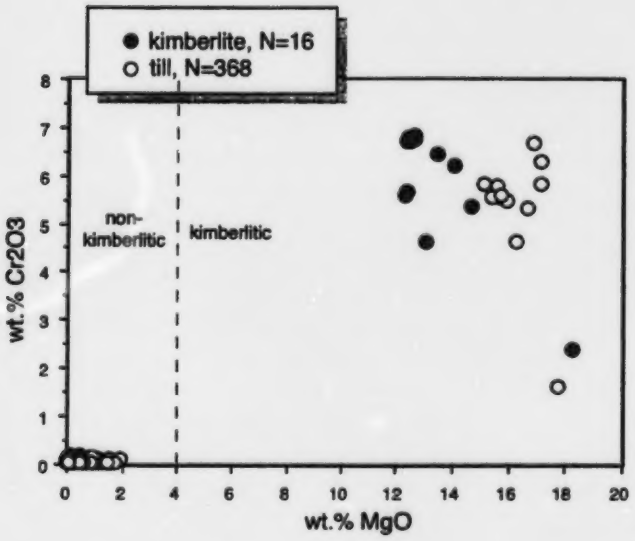


Figure 13. MgO versus Cr_2O_3 content for ilmenite from the Ranch Lake kimberlite and from GSC till samples collected down-ice.

Cr-diopside, and; orange staurolite was thought to be eclogitic garnet. Blue to blue-green calcite and apatite was picked because of its similarity to gahnite, a mineral present in metamorphosed sulphide deposits.

Distribution and abundance of indicator minerals

The relative proportion of kimberlite indicator minerals in the Ranch Lake kimberlite (sample 3215) is, in decreasing order of abundance: Cr-diopside > pyrope > > chromite > Mg-ilmenite. The ratio of Cr-diopside to pyrope in the kimberlite is approximately 2:1 (Table 1).

For the majority of the Canamera till samples, the relative proportion of indicator minerals down-ice from the kimberlite is, in decreasing order of abundance: Cr-diopside > pyrope >> chromite > Mg-ilmenite. The ratio of Cr-diopside to pyrope in till samples down-ice is, on average, 2:1 (Appendix A.2). Canamera collected over 1400 till samples on the Ranch Lake property. Because of the large number of sample sites and volume of indicator mineral abundance data, data for a subset (157 samples) of the 1400 samples along seven north-south transects located up-ice and between 0.6 and 21.5 km down-ice were selected for use in this study (Appendix A.2). Within the dispersal train, Canamera samples were selected at 150 m spacing, while north and south of the train, samples 0.5 to 2 km apart were selected (Appendix A Map 3). Abundance of Cr-diopside and pyrope in the selected (157) Canamera samples were contoured (Fig. 14 and 15) to show generalized distributions trends within the dispersal train with increasing distance down-ice. At its head, which is at Ranch Lake, the train is 500 m wide. It gradually widens down-ice to 1.5 km width at 16 km down-ice and 2 km at 30 km down-ice (Fig. 14 and 15). Lateral edges of the train are sharply defined by the presence or absence of indicator minerals in till. Background (up-ice) concentrations of all indicator minerals are zero. Patterns for Cr-diopside and pyrope abundance are similar and concentrations increase down-ice, reaching their highest levels between 15 and 19 km down-ice (Fig. 14 and 15).

The abundance of indicator minerals in the GSC till samples collected along the central axis of the dispersal train, both up- and down-ice (west) of the kimberlite, are summarized in Table 4 and shown in Figures 16 and 17. GSC till samples display the same relative proportion of indicator minerals as in the kimberlite and Canamera till samples, generally 2:1 (Table 1). Till samples collected up-ice of the kimberlite do not contain Cr-diopside, pyrope, chromite or Mg-ilmenite, indicating background concentrations in this area are zero. Indicator minerals are more abundant in the 0.25 to 0.5 mm than in the 0.5 to 0.84 mm fraction and abundances are greatest at 3 km and 19 km down-ice.

In the Ranch Lake kimberlite (sample 3215), indicator minerals occur in abundances of thousands of grains in a 10-kg kimberlite sample. Down-ice, 10-kg till samples contain hundreds of indicator minerals. Indicator minerals are most abundant in the finer (0.25 to 0.5 mm) fraction of kimberlite and till.

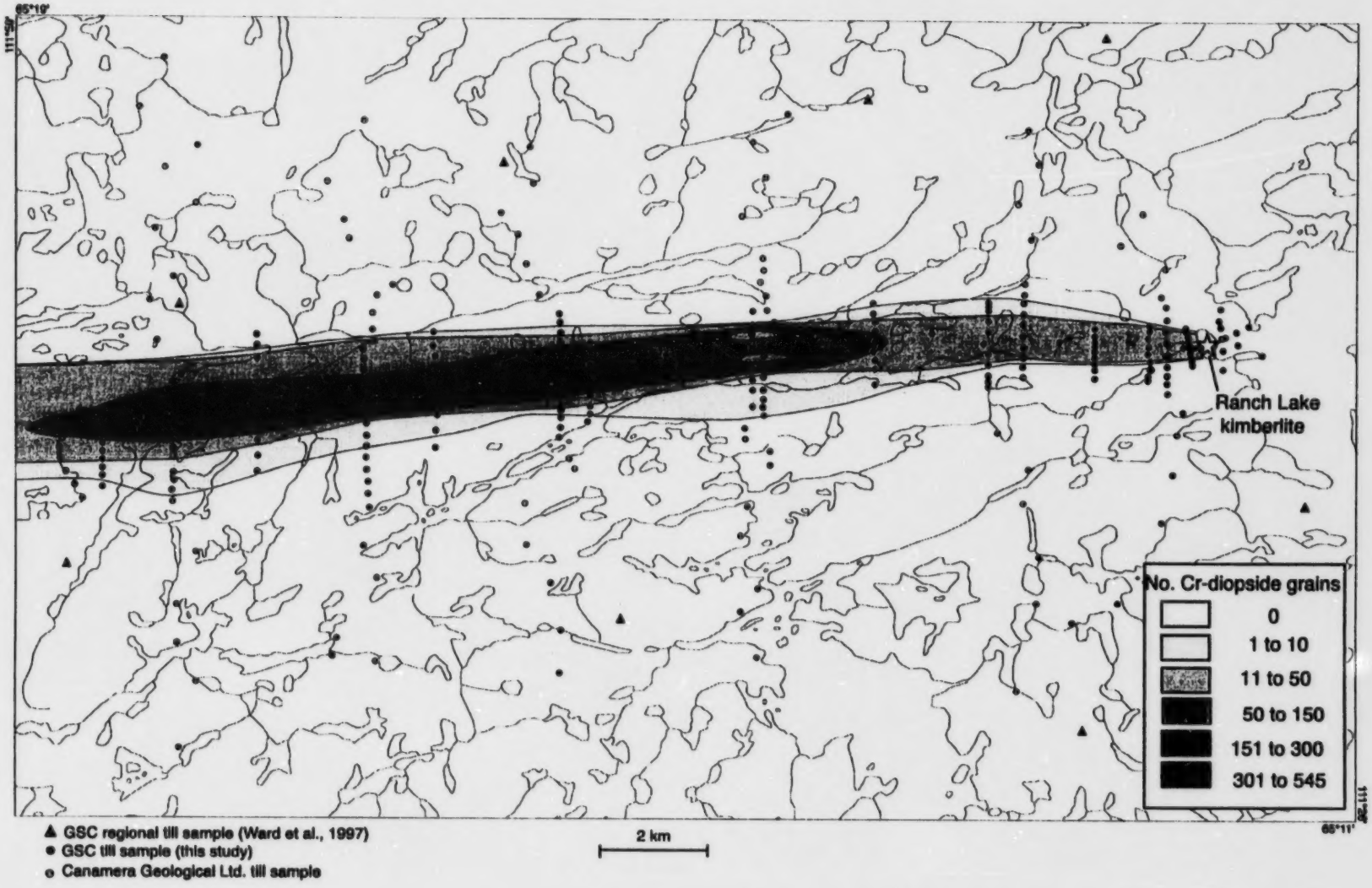


Figure 14 . Distribution of Cr-diopside in selected Canamera till samples.

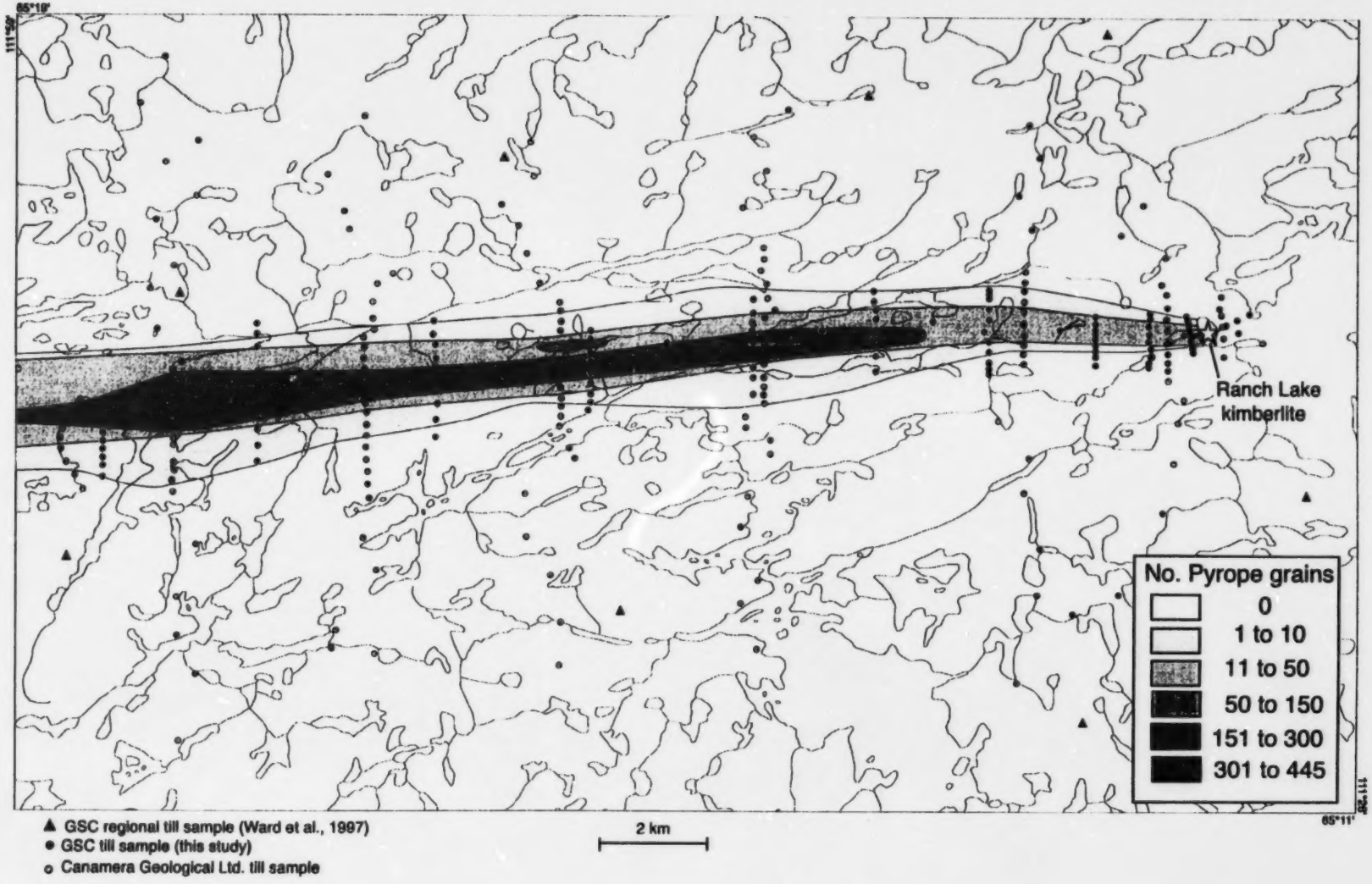


Figure 15 . Distribution of pyrope in selected Canamera till samples.

Table 4. Abundance of kimberlite indicator minerals in GSC till samples up-ice and down-ice of the Ranch Lake kimberlite along the central axis of the dispersal train

GSC Sample	distance from kimberlite (km)	0.25 to 0.5 mm fraction				0.5 to 0.84 mm fraction			
		Number of Pyrope grains	Number of Cr-diopside grains	Number of Mg-ilmenite grains	Number of Chromite grains	Number of Pyrope grains	Number of Cr-diopside grains	Number of Mg-ilmenite grains	Number of Chromite grains
94BCW3113	-0.95	0	0	0	0	0	0	0	0
94BCW3112	-0.75	0	2	0	0	0	0	0	0
94BCW3111	-0.50	0	0	0	0	0	0	0	0
94BCW3171	0.00	0	0	0	1	0	0	0	0
94BCW3100	0.05	0	0	0	0	0	0	0	0
94BCW3101	0.10	0	8	0	0	1	2	0	0
94BCW3102	0.25	70	59	0	2	9	23	0	0
94BCW3161	0.65	6	11	0	0	1	0	0	0
94BCW3156	1.00	104	170	0	0	26	39	1	0
94BCW3166	2.00	65	81	0	6	3	8	0	0
94BCW3193	2.70	119	448	0	8	68	109	0	3
94BCW3194	4.00	146	165	1	6	22	37	0	0
94BCW3192	5.00	160	131	1	6	19	18	0	0
94BCW3187	6.15	249	182	0	14	7	25	0	1
94BCW3209	7.20	67	105	0	3	1	5	0	0
94BCW3178	8.45	105	78	1	14	4	10	0	0
94BCW3208	10.00	155	184	0	3	12	23	0	0
94BCW3120	11.50	476	561	0	0	51	83	1	1
94BCW3207	13.10	199	155	2	8	20	31	0	1
94BCW3129	14.50	262	304	0	3	25	47	0	0
94BCW3206	16.00	62	66	0	1	6	10	0	0
94BCW3138	17.80	146	211	0	1	16	33	0	0
94BCW3205	19.10	637	779	3	27	108	148	0	4
94BCW3147	20.80	57	69	0	1	8	9	1	0

+ indicates site is down-ice of kimberlite
- indicates site is up-ice of kimberlite

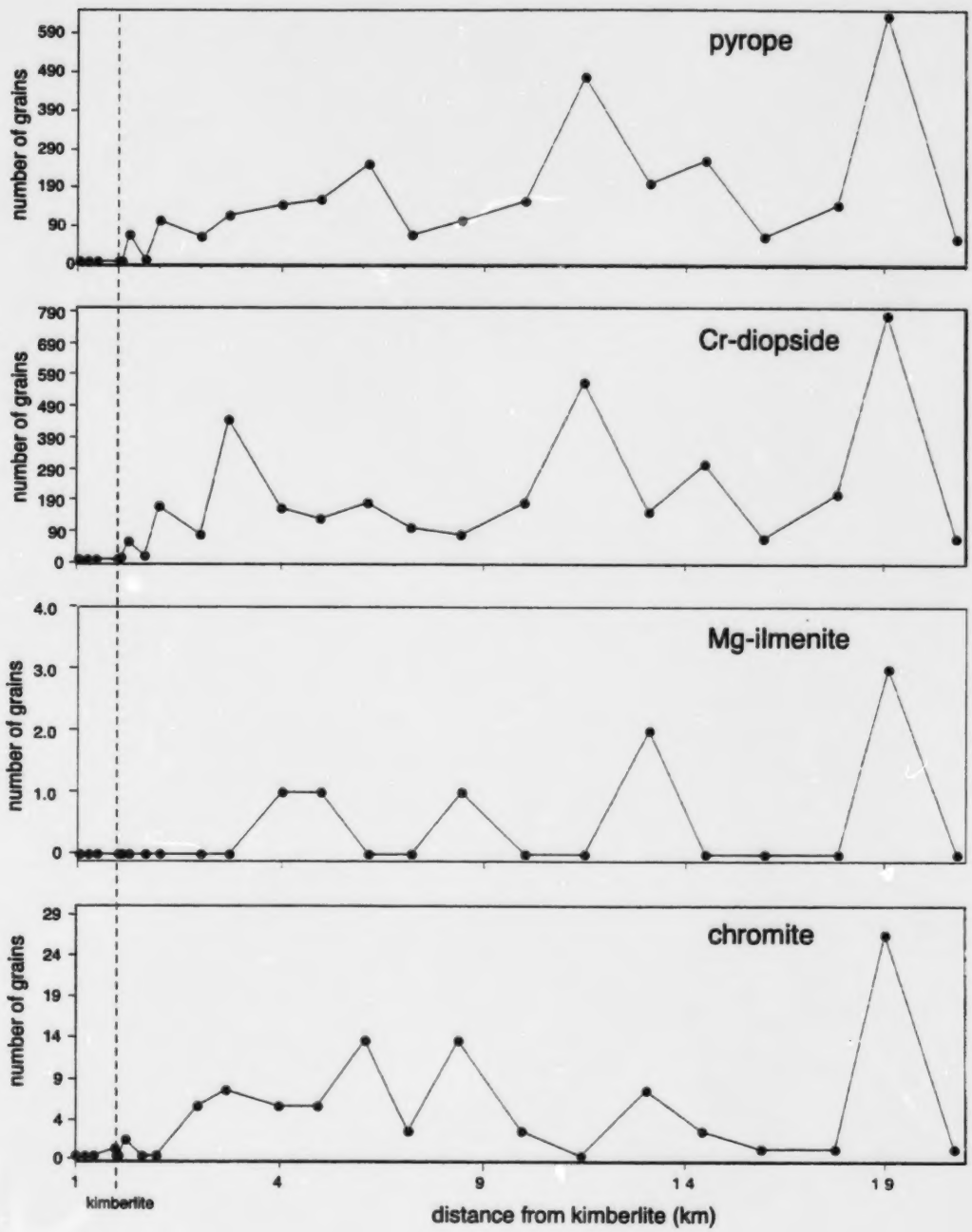


Figure 16. Abundance of pyrope, Cr-diopside, Mg-ilmenite and chromite in the 0.25 to 0.5 mm non-ferromagnetic heavy mineral fraction of GSC till samples up- and down-ice (west) of the Ranch Lake kimberlite (dashed line).

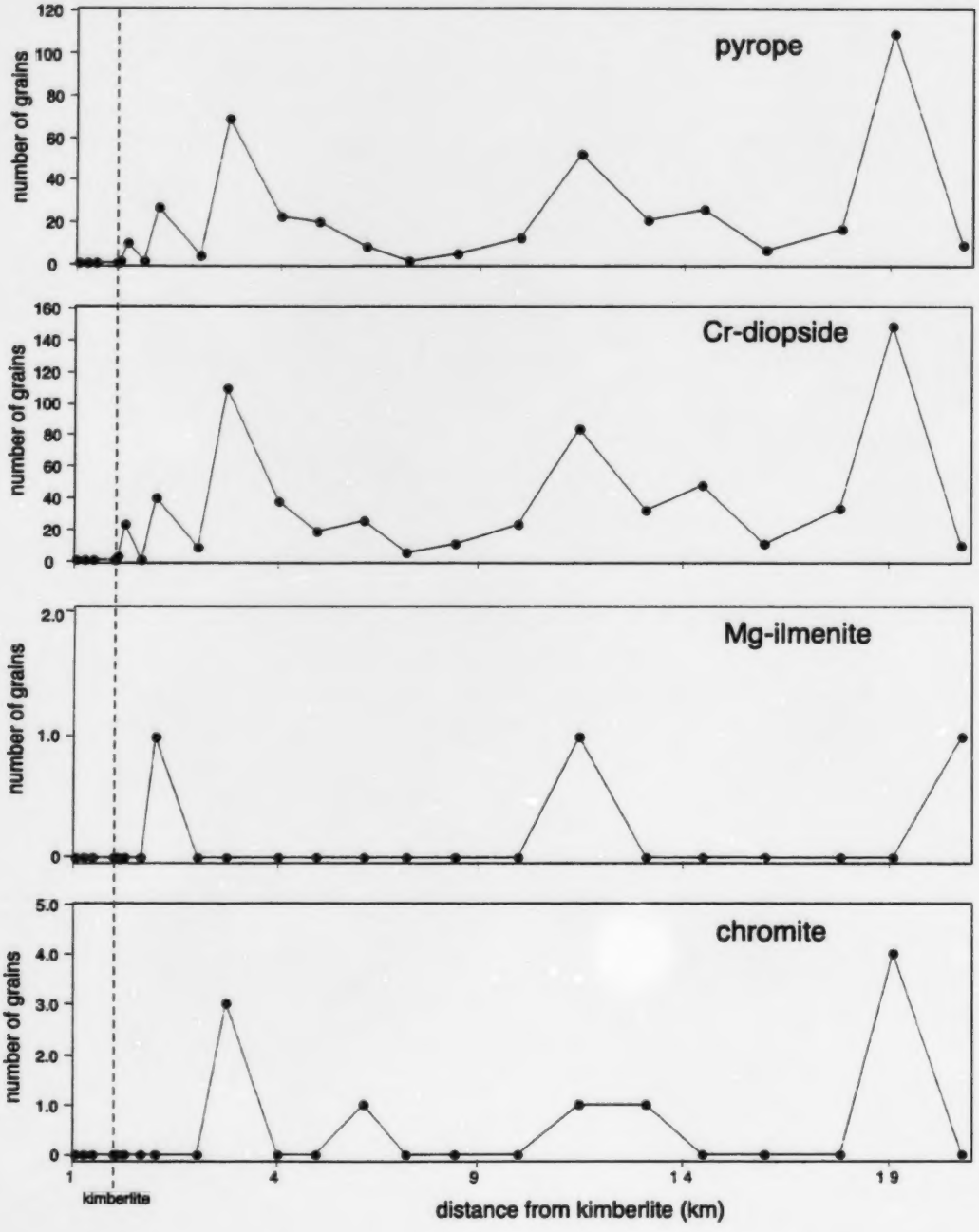


Figure 17. Abundance of pyrope, Cr-diopside, Mg-ilmenite and chromite in the 0.5 to 0.84 mm non-ferromagnetic heavy mineral fraction of GSC till samples up- and down-ice (west) of the Ranch Lake kimberlite (dashed line).

Pyrope surface features and textures

Kelyphite rims (Photo 4a) consisting mainly of pyroxene with spinel, phlogopite or serpentine are common on pyrope in kimberlite and are the products of alteration reactions (Reid and Dawson, 1972; Garvie and Robinson, 1982, 1984; Averill and McClenaghan, 1994; Dredge et al., 1996b). Kelyphite coatings are thought to be delicate and easily removed during abrasion (Garvie and Robinson, 1984; McCandless, 1990). Orange peel texture refers to the pitted texture on garnet surfaces that forms beneath kelyphite and resembles the surface texture of an orange (Photo 4b). Kelyphite may also form along fractures within garnets (Photo 4c). The number of pyrope grains in GSC till samples displaying any of the three surface textures or features are reported in Appendix D and listed according to distance down-ice.

Approximately 50 -70% of pyrope grains in the 0.25 to 0.5 mm fraction at 0.2 km down-ice display kelyphite rims. This percentage decreases with increasing distance down-ice to 25 -44% between 1 and 4 km down-ice and to 15 -26% between 4 and 10 km down-ice, to <34% between 10 and 20 km down-ice. In contrast, the percentage of pyrope with orange peel texture increases with increasing distance down-ice (Appendix D). Kelyphite along fractures shows no recognizable trends. Surface features on pyrope in the 0.5 to 0.84 mm do not display patterns related to transport distance.

Kimberlite geochemistry

Major and trace element geochemistry for two Ranch Lake volcaniclastic kimberlite samples (KIA93-RI, BCW94-RL) are listed in Appendix E. The two samples are crustally contaminated, as is indicated by their elevated concentrations of SiO_2, and Al_2O_3 compared to 'fresh' kimberlites. Application of the kimberlite contamination index (CI) of Clement (1982) is consistent with the Ranch Lake volcaniclastic kimberlite samples being classified as contaminated (Appendix E). Nevertheless, both Ranch Lake samples retain the characteristic kimberlite geochemical signature, being rich in elements of ultramafic affinity (e.g. Mg, Ni, Cr, Co), as well as having a high 'incompatible' element signature (e.g. Sr, Ba, La, Ce, Sm, Nd, Ta, P). The incompatible element signature, while being typical of a kimberlite, i.e. LREE enriched with high La/Yb, is remarkable in that the concentration levels are at low levels compared to many kimberlites.

Concentration levels of selected elements in the Ranch Lake kimberlite samples, when compared to archetypal (Group I) kimberlites from various global localities plot at slightly higher abundances than the world 'low values', but below the global 'world average' (Fig. 18a, b). In other words, the geochemistry of the two Ranch Lake volcaniclastic kimberlite samples analyzed is quite typical of other kimberlites worldwide, but most element concentrations are towards the low end of the spectrum, with the exception of Ni, Cr and Co (and MgO). This pattern may be due to the variable (10 to 50%), but high, contamination by crustal material.

Comparison of kimberlite and local bedrock geochemistry

The average concentration (from two samples) of oxides and elements for the Ranch lake kimberlite is compared with average concentration values for a variety of local

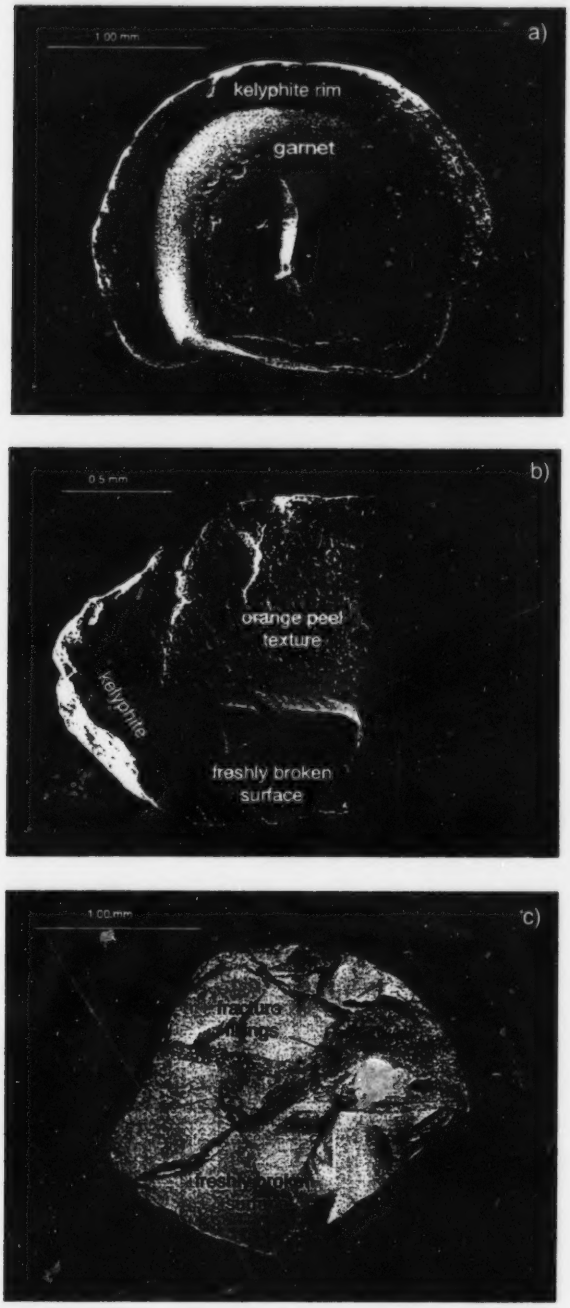


Photo 4. Secondary electron images showing examples of features on pyrope grains from kimberlite: a) soft kelyphite rim; b) pitted orange peel texture; and, c) kelyphite along fractures within pyrope grains.

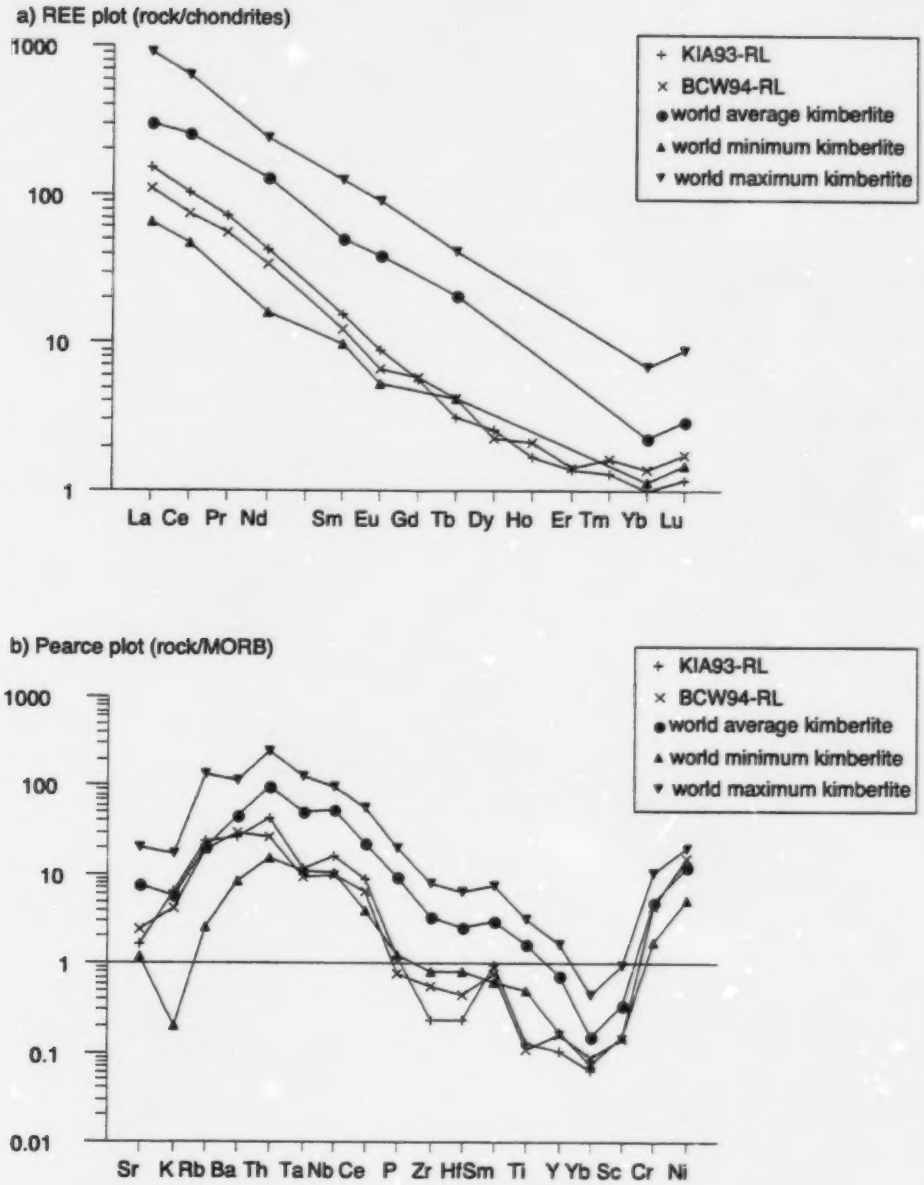


Figure 18. a) Chondrite normalized rare earth element (REE) plot (normalization values after Nakamura, 1974) and b) Pearce plot (samples normalized to MORB) for the two Ranch Lake kimberlite samples analyzed. For comparison, world average plus high and low values for archetypal (GpI) kimberlites are also included.

bedrock types in Figure 19. Local bedrock geochemical data are from Davis (1992) and Davis et al. (1994), with an additional 33 analyses of Yellowknife Super Group metasedimentary rocks from the Lac de Gras area (Kjarsgaard, unpublished data). Comparison of the concentration levels of elements/oxides in the Ranch Lake kimberlite with local bedrock types (Fig. 19a) suggests that Ni, MgO, Co and Nb are significantly higher in the kimberlite, and these elements have the greatest potential as kimberlite pathfinder elements in till down-ice of the Ranch Lake kimberlite.

The incompatible element signature of the Ranch Lake pipe is typical for kimberlite, however, it also is low. If the two highly contaminated samples examined are atypical of the Ranch Lake pipe, then a broader comparison of kimberlite and local bedrock geochemistry is required, such as a comparison of the concentration levels of elements/oxides in global 'world average' kimberlite with only biotite granite and YKS metasediments, the two rock types that predominate the local geology (Fig. 19b). This broad comparison suggests that in addition to Ni, MgO, Co and Nb, that La, Ce, Ta, P and Ti may also potential kimberlite pathfinder elements in till down ice of the Ranch Lake kimberlite. These potential pathfinder elements also could be effective for kimberlite exploration across the entire Lac de Gras area, provided ill is sampled at a one km spacing or better.

Till geochemistry

Of all the elements determined for both the <0.002 mm and <0.063 mm fractions, Cr, Ba, Ce and Th in the <0.063 mm fraction show the greatest contrast between till up-ice and down-ice of the Ranch Lake kimberlite. Concentrations of these elements are highest between 15 and 20 km down-ice (Fig. 20, 21, 22, 23) which correspond to areas of thin till (till veneer) overlying bedrock (Fig. 5). GSC till samples collected between 0 and 15 km down-ice are from areas characterized by thicker till deposits (Fig. 5).

DISCUSSION & CONCLUSIONS

Kimberlite indicator mineral chemistry

The high proportion of Cr-pyropes, chromites and Cr-diopsides, as well as high Mg-numbers for diopside and olivine from the Ranch Lake kimberlite indicate that these minerals are predominantly from peridotitic mantle sources (i.e. garnet-lherzolite, harzburgite and dunite). Megacryst minerals, which are dominant in the indicator mineral suite of many other kimberlites (e.g. Schulze, 1999), are surprisingly rare with only a few Cr-poor pyrope garnet megacrysts, Mg-ilmenite and Cr-diopside found among thousands of indicator mineral grains. Also, absent are eclogite-derived garnets. None were found in this study, although Cookenboo (1996) reports finding 18 grains among 97 orange low-Cr garnets from Ranch Lake. His identification is based on a TiO_2 vs. Na_2O discrimination plot. It is not clear, however, if he screened the low-Cr garnets in terms of FeO, MgO and CaO prior to using the TiO_2-Na_2O plot. Only Cr-poor pyrope-almandine garnets with FeO_{tot} < 22 wt.% and > 5wt.% MgO and CaO qualify as eclogitic garnets (Fipke et. al. 1989, Schulze 1999). The eclogitic garnets can then be further subdivided using a TiO_2 and Na_2O discriminant plot between Group I

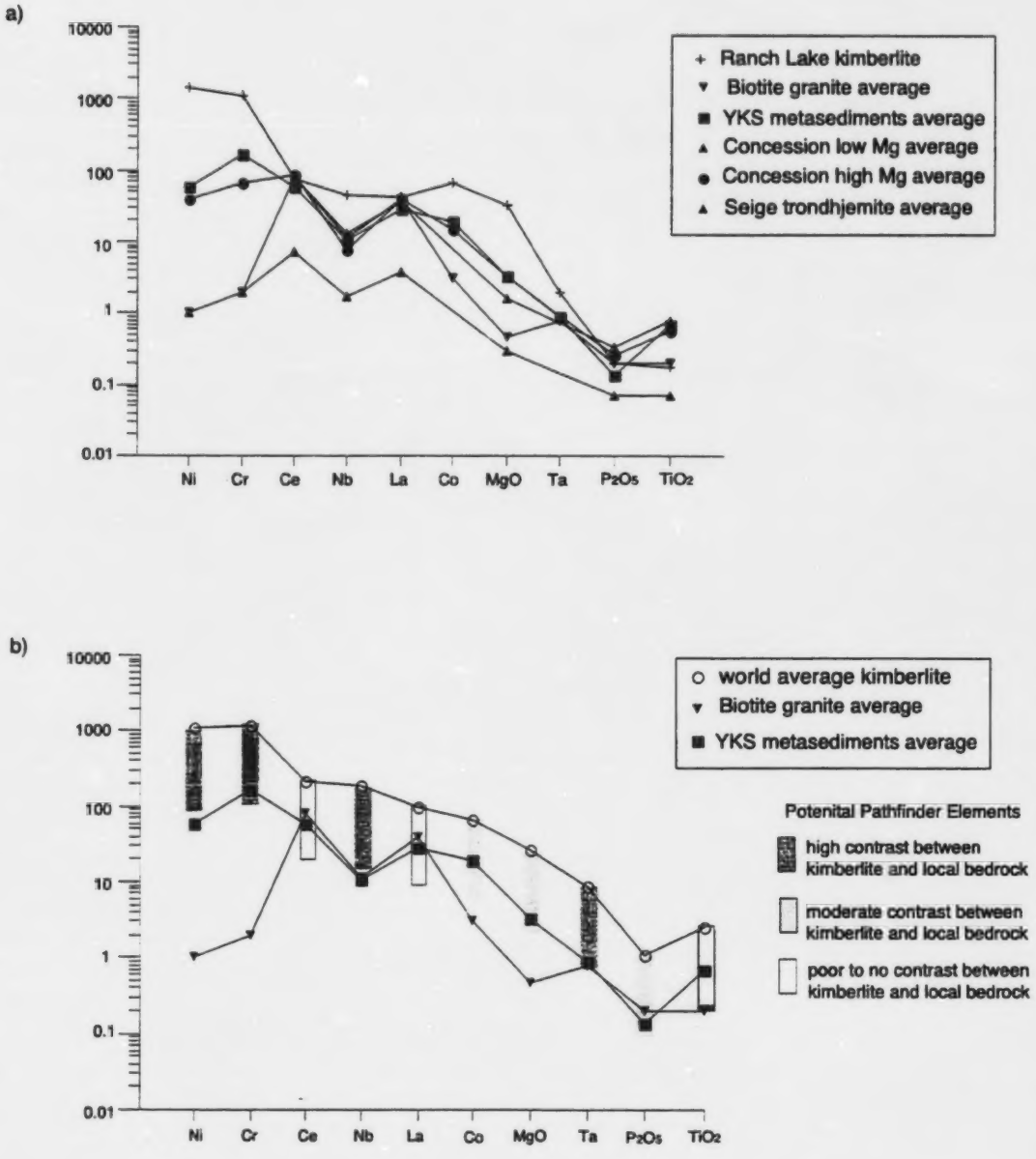


Figure 19. a) Comparison of selected element concentrations in Ranch Lake kimberlite and all regional bedrock lithologies; b)comparison of selected element concentrations in world average kimberlite and local bedrock for the determination of potential pathfinder elements in till.

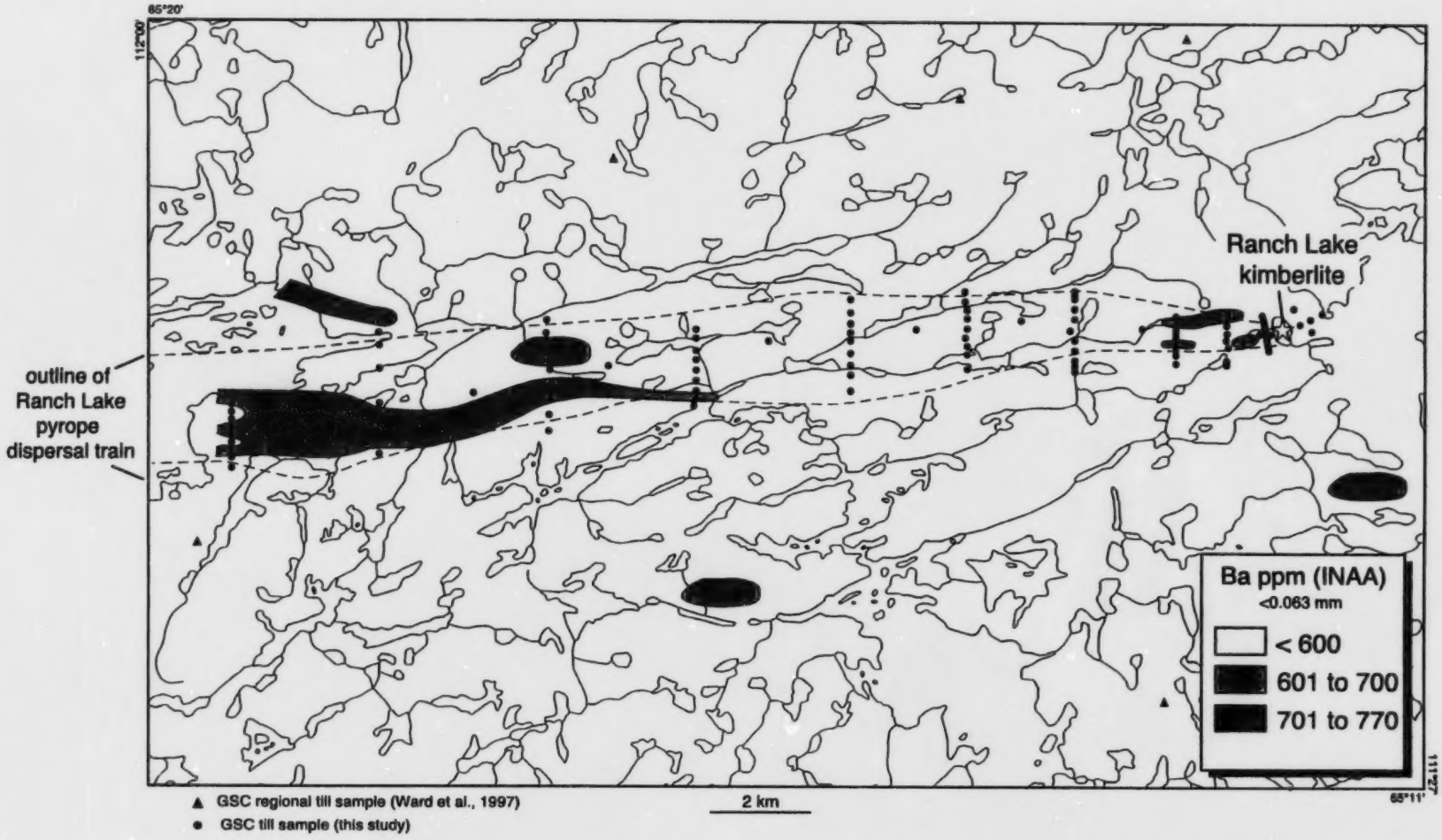


Figure 20. Distribution of Ba in the <0.063 mm fraction of GSC till samples up-ice and down-ice of the Ranch Lake kimberlite. Outline of Canamera pyrope dispersal train shown by dashed line.

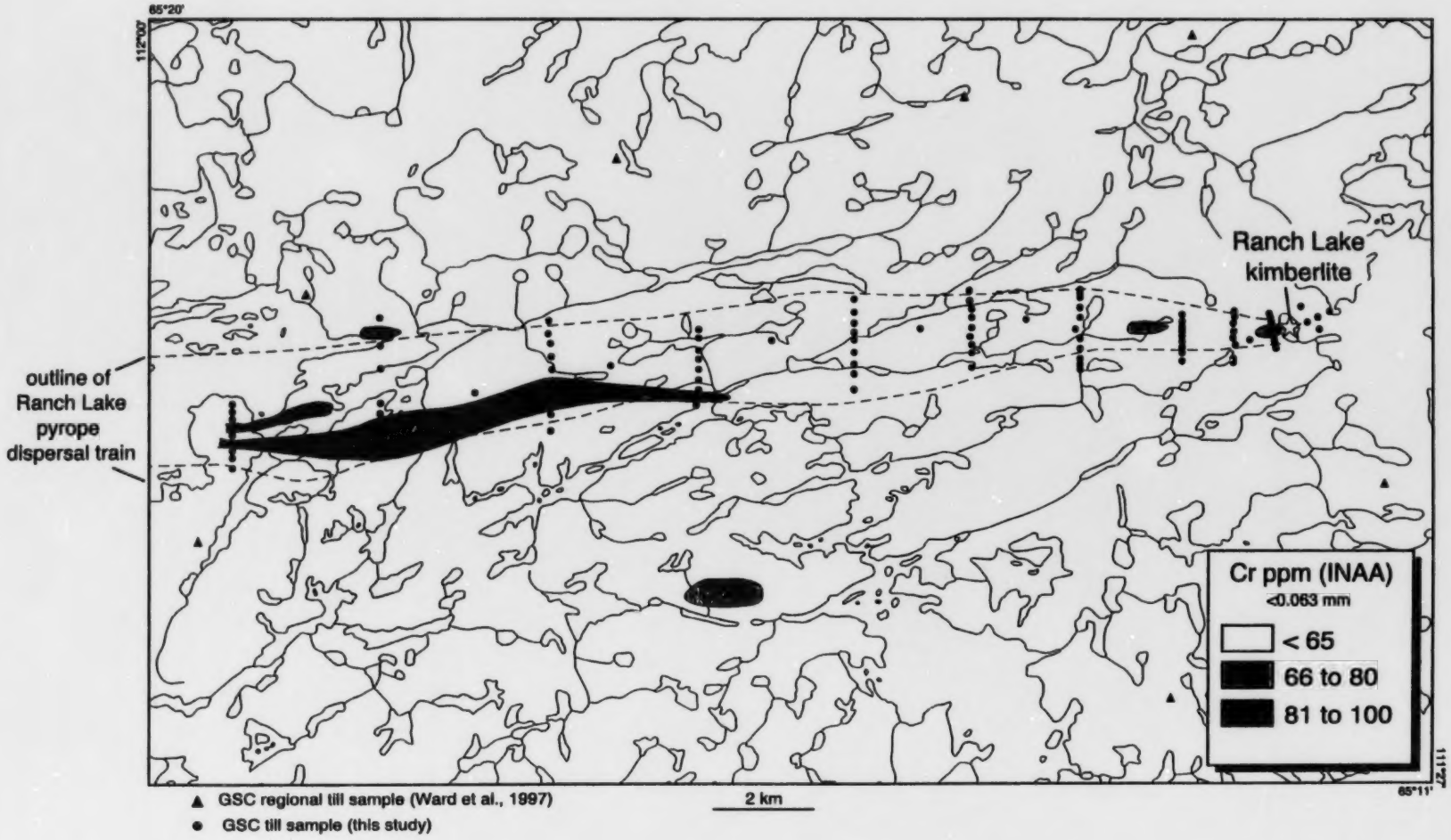


Figure 21. Concentration of Cr in the <0.063 mm fraction of GSC till samples up-ice and down-ice of the Ranch Lake kimberlite. Outline of Canamera pyrope dispersal train shown by dashed line.

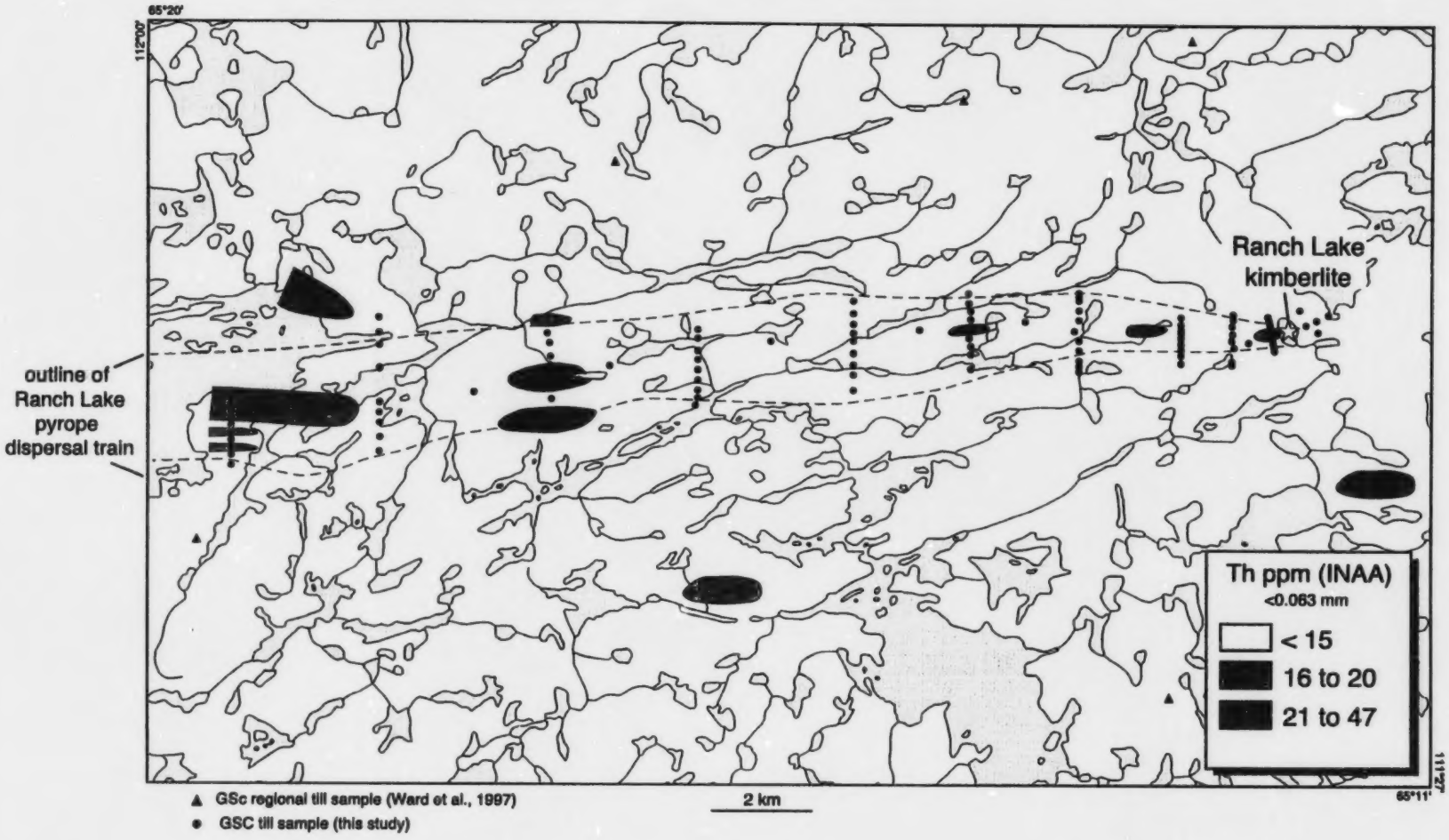


Figure 22. Concentration of Th in the <0.063 mm fraction of GSC till samples up-ice and down-ice of the Ranch Lake kimberlite. Outline of Canamera pyrope dispersal train shown by dashed line.

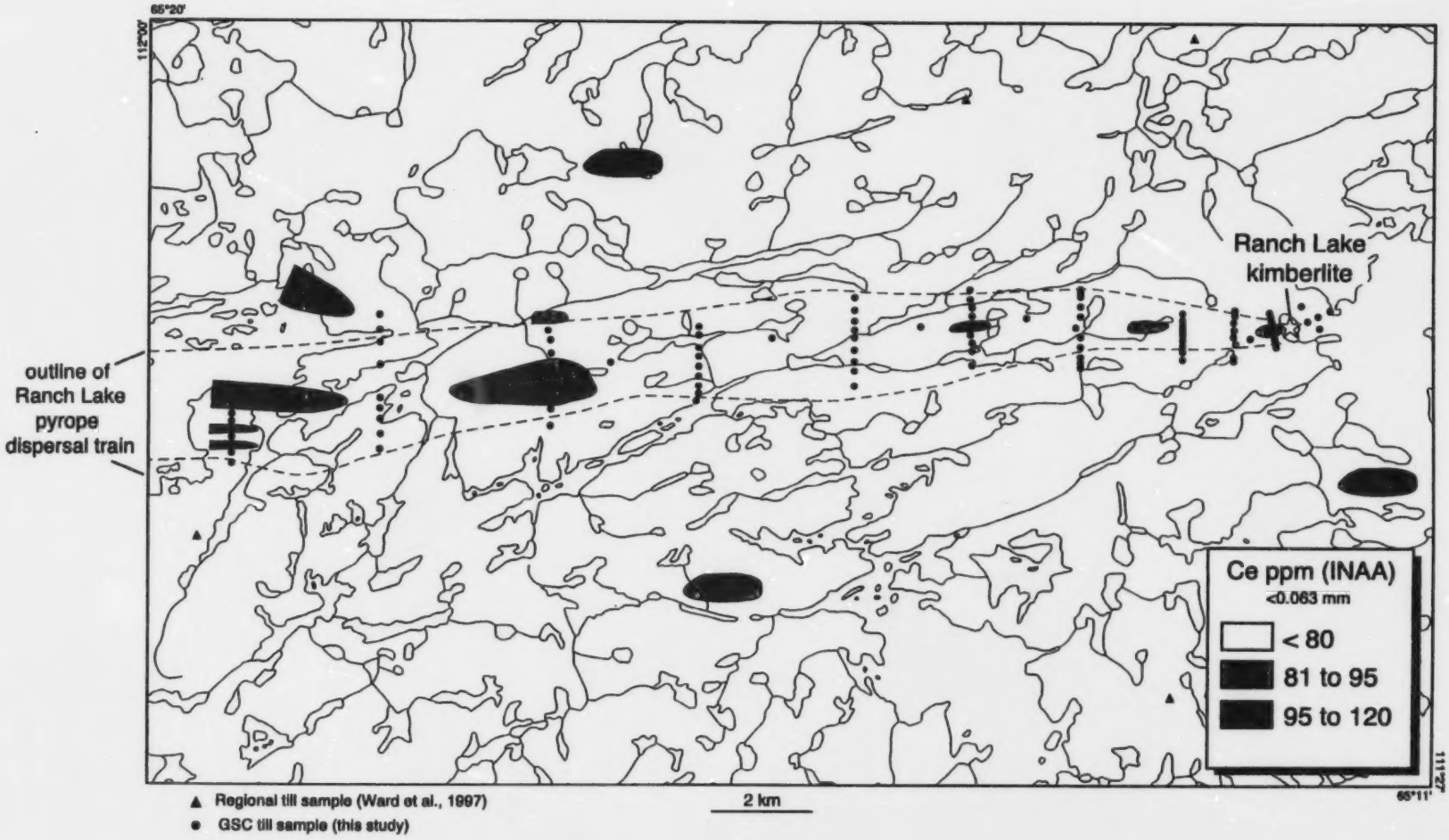


Figure 23. Concentraiton of Ce in the <0.063 mm fraction of GSC till samples up-ice and down-ice of the Ranch Lake kimberlite. Outline of Canamera pyrope dispersal train shown by dashed line.

(diamondiferous) and Group II (non diamondiferous) eclogitic garnets (McCandless and Gurney, 1989).

A significant number (14.8%) of Cr-pyrope garnets from the Ranch Lake kimberlite and till fall in the subcalcic 'G10' field of Gurney (1984), although less than half this number (6.8%) fall in the subcalcic field as defined by Sobolev (1977). The low CaO concentrations in these Cr-pyrope, as well as the substantial number of very Cr-rich chromite, suggests the Ranch Lake kimberlite has sampled diamondiferous harzburgite or dunite peridotitic mantle. Kimberlite indicator mineral studies by Cookenboo (1996) used Ni in garnet thermometry and orthopyroxene compositions to illustrate that these indicator minerals originated at P-T conditions consistent with diamond stability in the mantle. The suggested diamond potential of the Ranch Lake kimberlite, based on indicator mineral studies (Cookenboo, 1996; this work) is consistent with the recovery of diamonds (20ct/100t; Cookenboo, 1996) from bulk sampling the Ranch Lake kimberlite by Canamera.

Indicator mineral dispersal patterns

Figure 24 shows the location of the Ranch Lake dispersal train along with the GSC reconnaissance till samples collected across the Lac de Gras region (Ward et al, 1996b; Dredge et al., 1997; Kerr, 2000). Although till samples were not collected from the Ranch Lake dispersal train in the reconnaissance-scale GSC sampling program, its lack of detection is not unexpected as the dispersal train is extremely narrow (0.5 to 2 km) and the GSC samples were collected 15 to 20 km apart. Sample spacing would have to be decreased to approximately 5 km spacing to detect similar dispersal trains in the region. A sample spacing of <500 m would be required to outline individual dispersal trains.

Till geochemistry of the dispersal train

Trace element concentration patterns for Cr, Ba, Ce and Th in the <0.063 mm fraction do not define a continuous, sharp-edged, linear dispersal train as outlined by indicator minerals. Rather, geochemical patterns define a discontinuous dispersal train between 15 and 20 km down-ice. Additional till samples north and south of the train are needed to fully define the till geochemical signature of the dispersal train.

Formation of the dispersal train

The narrow ribbon shape and sharp edges of the Ranch Lake dispersal train indicate that it was formed by a single, sustained ice flow event towards the west. Indicator mineral and till trace element concentrations are highest in till samples between 15 and 20 km down-ice. The effect of earlier and later ice flow events to the southwest and northeast respectively, on dispersal of debris from the Ranch Lake kimberlite is not apparent from the distribution of indicator minerals in the Canamera samples.

The highest indicator mineral concentrations in the Ranch Lake dispersal train occur between 15 and 20 km. These high concentrations so far down-ice could be the result of glacially transported blocks or fragments (boulders) of kimberlite that were crushed and released indicator minerals between 15 and 20 km down-ice. An second

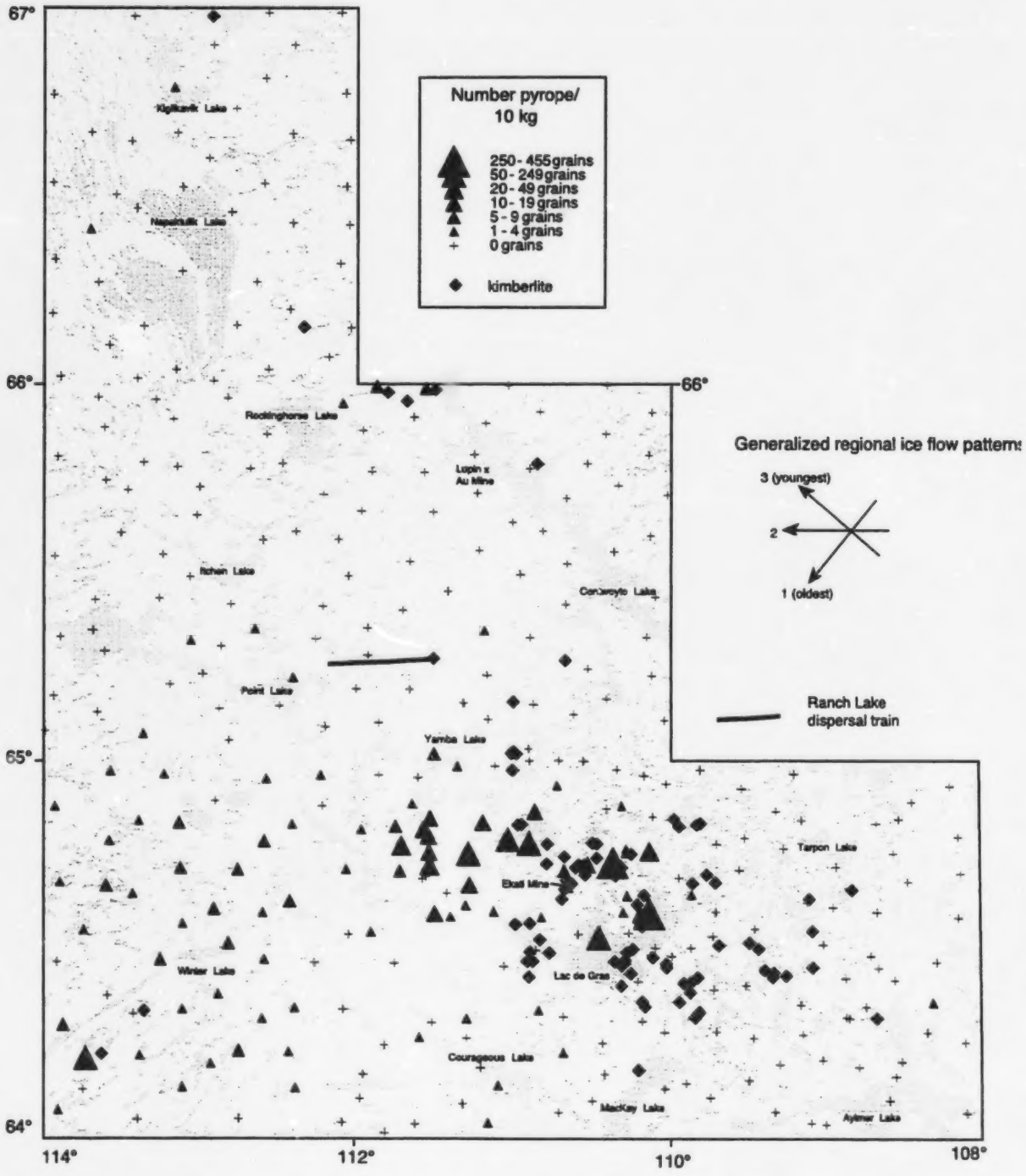


Figure 24. Distribution of pyrope in till across the Lac de Gras region (from Dredge et al.,1997; Kerr, 2000) and location of the Ranch Lake dispersal train.

explanation is that the high indicator mineral concentrations are related to another unknown kimberlite source west of the Ranch Lake kimberlite. However, similar pyrope compositions (Fig. 25) for till down-ice and the Ranch Lake kimberlite and similar proportions of Cr-diopside to pyrope in till down-ice and the kimberlite suggest that these grains were are all derived from the Ranch Lake kimberlite. A third explanation for the differences in concentration may be differential erosion by the ice sheet. At certain periods, the glacier would have more erosive than other times, producing bands or pockets of kimberlite-rich till which would be carried along in the ice. Mechanisms that produced increased erosion of the kimberlite could have included plucking, increased basal shear, or subglacial floodwaters.

Lodgment till characteristically is transported short distances down-ice (Dreimanis, 1990). From the significant distance of down-ice dispersal (>30 km), it is unlikely that the kimberlitic debris was transported in basal ice layers and deposited as lodgment. Rather, the material may have been transported passively in the ice near the base but not in contact with the substrate. To form and preserve a dispersal train, Miller (1984) suggested material is entrained along smear or thrust planes in a glacier and subsequently deposited by passive melt-out. These processes would result in little dilution or mixing of the kimberlite debris which is consistent with the distinct, high, contrast ribbon-shaped indicator mineral train observed. Batterson (1989) suggested similar processes formed the ribbon-shaped, 40+ km long Strange Lake dispersal train in Labrador.

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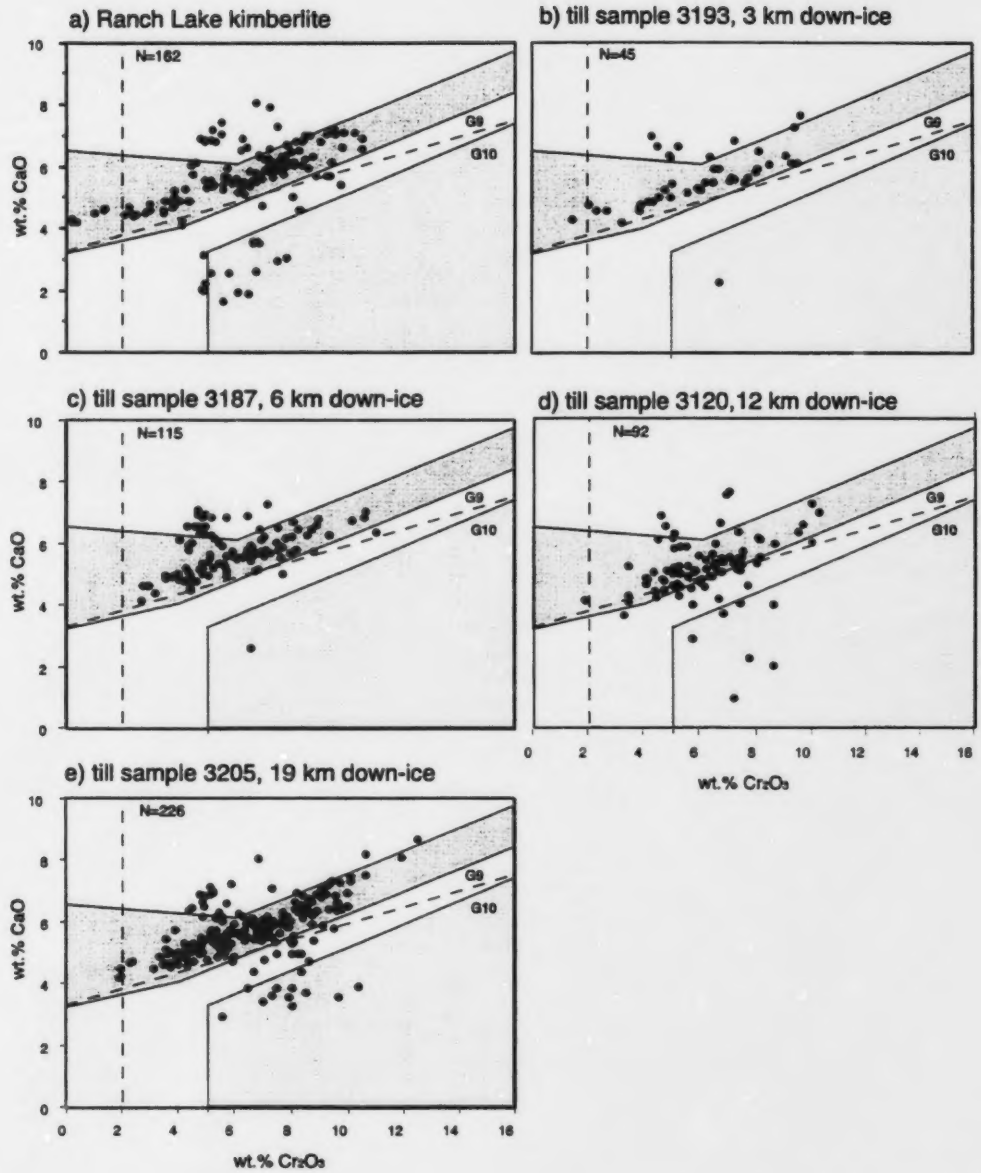

Figure 25. Comparison of pyrope compositions (CaO versus Cr_2O_3) between the Ranch Lake kimberlite and GSC till samples collected at 3, 6, 12 and 19 km down-ice. Upper shaded area is the field for lherzolite garnets; lower shaded field is the composition of subcalcic garnets from the diamond stability field (Sobolev, 1977, Sobolev et al., 1993). Dashed diagonal line separates G9 and G10 garnets (Gurney, 1984); dashed vertical line is from Fipke et al. (1995).

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Appendix A Till sample location data

Appendix A.1 GSC till sample location and descriptive data

Appendix A.2 Canamera sample location, Cr-diopside and pyrope counts

Map 1 Location of GSC till samples for <0.063 mm fraction

Map 2 Location of GSC till samples for heavy mineral analysis

Map 3 Location of Canamera till samples used in this study

Appendix A.1 GSC till sample locations, descriptions and striation data

Sample	Easting	Northing	Material	Sample Depth (cm)	Clast content	% Sand	% Silt	% Clay	Geochem Sample?	Heavy mineral sample?	Site type	Degree of oxidation	Orientation of striation set 1 (older)	Orientation of striation set 2 (younger)
94BCW3100	475940	7238930	till	35-40	5%				yes	yes	mudboil	moderate		
94BCW3101	475885	7238925	till	30-40	30%				yes	yes	hole	moderate		
94BCW3102	475765	7238935	till	20-30	5%	59.3	37.9	2.9	yes	yes	mudboil	low to none		
94BCW3103	475875	7238985	till	60-70	10-15%	61.3	36.0	2.6	yes	yes	mudboil	moderate		
94BCW3104	475865	7239060	till	45-50	15-20%				yes	yes	mudboil	moderate		
94BCW3105	475850	7239135	till	25-60	30%				yes	yes	mudboil	moderate		
94BCW3106	475835	7239210	till	50-60	5-10%				yes	yes	mudboil	moderate	268-282	275
94BCW3107	475900	7238840	till	30-40	5%				yes	yes	mudboil	moderate		
94BCW3108	475915	7238765	till	25-50	30%				yes	yes	mudboil	low to none		
94BCW3109	475930	7238690	till	30-45	20-25%				yes	yes	mudboil	moderate	268	
94BCW3110	475943	7238615	till	35-55	5%				yes	yes	mudboil	moderate	270-272	265
94BCW3111	476463	7239125	till	20-30	20-25%				yes	yes	mudboil	moderate		
94BCW3112	476669	7239225	till	55-60	5%	65.9	31.2	2.8	yes	yes	mudboil	moderate		
94BCW3113	476905	7239333	till	25-40	15-20%				yes	yes	mudboil	moderate	265-266	275
94BCW3114	476700	7238985	till	65-75	30%				yes	yes	mudboil	moderate		
94BCW3115	476335	7239430	till	30-35	30%				yes	yes	mudboil	moderate		
94BCW3116	464475	7237400	till	25-35	30%				yes	no	mudboil	moderate		
94BCW3117	464475	7237600	till	30-40	15-20%				yes	no	mudboil	moderate		
94BCW3118	464475	7237800	till	40-45	10-15%				yes	no	mudboil	moderate		
94BCW3119	464475	7238000	till	40-50	5%				yes	no	mudboil	high		
94BCW3120	464475	7238200	till	40-45	15-20%	74.0	24.4	1.6	yes	yes	mudboil	moderate		
94BCW3121	464475	7238400	till	45-60	15-20%				yes	no	mudboil	high		
94BCW3122	464475	7238575	till	35-40	15-20%				yes	no	mudboil	high		
94BCW3123	464475	7238775	till	30-35	5-10%				yes	no	mudboil	high		
94BCW3124	464475	7238975	till	40-50	15-20%				yes	no	mudboil	high		
94BCW3125	461550	7237000	till	35-45	5%				yes	no	mudboil	moderate	272-284	
94BCW3126	461560	7237325	till	30-55	10-15%				yes	no	mudboil	moderate	260	
94BCW3127	461585	7237615	till	20-35	30%				yes	no	mudboil	moderate	256-258	
94BCW3128	461610	7237920	till	15-30	30%				yes	no	mudboil	moderate		
94BCW3129	461575	7238200	till	40-50	30%	84.9	14.5	0.6	yes	yes	mudboil	high		
94BCW3130	461565	7238455	till	30-35	20-25%				yes	no	mudboil	low to none	256-262	
94BCW3131	461545	7238720	till	35-50	15-20%				yes	no	mudboil	high		
94BCW3132	461500	7238905	till	25-40	10-15%				yes	no	mudboil	moderate		
94BCW3133	461515	7239160	till	25-35	15-20%				yes	no	mudboil	moderate		
94BCW3134	458190	7239050	till	30-40	15-20%				yes	no	mudboil	high		
94BCW3135	458195	7238750	till	25-35	15-20%				yes	no	mudboil	high		
94BCW3136	458200	7238465	till	35-45	20-25%				yes	no	mudboil	high		
94BCW3137	458205	7238175	till	30-35	15-20%				yes	no	mudboil	moderate		
94BCW3138	458205	7237540	till	25-30	5%	59.9	38.0	2.1	yes	yes	mudboil	moderate		
94BCW3139	458200	7237335	till	30-40	5%				yes	no	mudboil	moderate		
94BCW3140	458205	7237130	till	30-35	10-15%				yes	no	mudboil	high		
94BCW3141	458210	7236835	till	30-35	30%				yes	no	mudboil	moderate		
94BCW3142	458200	7236545	till	30-35	10-15%				yes	no	mudboil	moderate		

Appendix A.1 GSC till sample locations, descriptions and striation data

Sample	Easting	Northing	Material	Sample Depth (cm)	Clast content	% Sand	% Silt	% Clay	Geochem Sample?	Heavy mineral sample?	Site type	Degree of oxidation	Orientation of striation set 1 (older)	Orientation of striation set 2 (younger)
94BCW3143	455300	7237510	till	30-40	10%				yes	no	mudboil	high		
94BCW3144	455300	7237365	till	20-30	15%				yes	no	mudboil	low to none	250-255	
94BCW3145	455300	7237215	till	25-35	30%				yes	no	mudboil	moderate	260	
94BCW3146	455300	7237065	till	20-35	20%				yes	no	mudboil	moderate	260	
94BCW3147	455300	7236910	till	50-60	20-25	73.0	24.6	2.4	yes	yes	mudboil	moderate		
94BCW3148	455300	7236760	till	30-40	10%				yes	no	mudboil	low to none	252-258	
94BCW3149	455300	7236605	till	25-40	10%				yes	no	mudboil	moderate		
94BCW3150	455300	7236460	till	25-35	10%				yes	no	mudboil	low to none	264-269	275
94BCW3151	455300	7236255	till	25-45	20-25%				yes	no	mudboil	moderate		
94BCW3152	475005	7238334	till	40-50	20-25%	90.9	6.8	2.3	yes	no	mudboil	moderate		
94BCW3153	475004	7238406	till	15-35	5%				yes	no	mudboil	moderate		
94BCW3154	475020	7238520	till	30-50	15-20%				yes	no	mudboil	moderate		
94BCW3155	475046	7238676	till	35-55	10-15%				yes	no	mudboil	moderate		
94BCW3156	475001	7238817	till	75-85	15-20%	74.7	24.0	1.2	yes	yes	mudboil	moderate		
94BCW3157	475017	7238945	till	45-55	15-20%				yes	no	mudboil	high		
94BCW3158	475007	7239100	till	40-50	5%	66.7	31.6	1.7	yes	no	mudboil	high		
94BCW3159	475036	7239235	till	35-55	5%				yes	no	mudboil	high		
94BCW3160	475030	7239340	till	25-35	15-20%	50.7	46.4	2.8	yes	no	mudboil	high		
94BCW3161	475333	7238781	till	65-75	5%	65.0	32.8	2.3	yes	yes	mudboil	moderate		
94BCW3162	474000	7238360	till	30-50	15-20%				yes	no	mudboil	moderate		
94BCW3163	474000	7238520	till	25-35	10-15%				yes	no	mudboil	moderate		
94BCW3164	474000	7238630	till	25-30	<5%				yes	no	mudboil	high		
94BCW3165	474000	7238745	till	25-35	5%	97.0	1.2	1.8	yes	no	mudboil	moderate	268-272	262
94BCW3166	474000	7238860	till	40-50	10%				yes	yes	mudboil	moderate		
94BCW3167	474000	7238950	till	15-30	15%				yes	no	mudboil	moderate		
94BCW3168	474000	7239030	till	25-35	15-20%				yes	no	mudboil	moderate		
94BCW3169	474000	7239135	till	25-43	15-20%				yes	no	mudboil	moderate		
94BCW3170	474000	7239275	till	30-40	10%				yes	no	mudboil	moderate		
94BCW3171	475980	7238935	till	35-40	5%	67.7	25.3	7.0	yes	yes	hole	moderate		
94BCW3172	475813	7239290	till	15-40	5%				yes	yes	mudboil	moderate		
94BCW3173	475455	7239260	no sample	no sample	no sample				no	no	no sample	no sample	270-274	
94BCW3174	467545	7237805	till	20-35	15-20%				yes	no	mudboil	moderate	264-269	
94BCW3175	467545	7238115	till	35-55	5%				yes	no	mudboil	moderate	267	
94BCW3176	467545	7238305	till	25-30	5%				yes	no	mudboil	low to none		
94BCW3177	467545	7238535	till	35-50	5%				yes	no	mudboil	low to none		
94BCW3178	467545	7238780	till	20-35	15-20%	58.7	38.0	3.3	yes	yes	mudboil	moderate		
94BCW3179	467545	7238930	till	45-60	5%				yes	no	mudboil	high		
94BCW3180	467545	7239105	till	30-45	5%				yes	no	mudboil	low to none		
94BCW3181	467545	7239320	till	30-40	10-15%				yes	no	mudboil	moderate		
94BCW3182	467545	7239570	till	30-40	10-15%				yes	no	mudboil	moderate		
94BCW3183	469815	7239735	till	20-30	5-10%				yes	no	mudboil	high		
94BCW3184	469825	7239540	till	20-40	5-10%				yes	no	mudboil	low to none		
94BCW3185	469860	7239375	till	30-40	5-10%				yes	no	mudboil	high	264-266	

Appendix A.1 GSC till sample locations, descriptions and striation data

Sample	Easting	Northing	Material	Sample Depth (cm)	Clast content	% Sand	% Silt	% Clay	Geochem Sample?	Heavy mineral sample?	Site type	Degree of oxidation	Orientation of striation set 1 (older)	Orientation of striation set 2 (younger)
94BCW3186	469865	7239215	till	30-35	15-20%				yes	no	mudboil	high	262	
94BCW3187	469860	7239015	till	25-55	5%	43.2	53.4	3.4	yes	yes	mudboil	high		
94BCW3188	469830	7238845	till	20-Oct	15%	46.1	43.3	10.6	yes	no	mudboil	moderate	267	
94BCW3189	469860	7238685	till	25-35	15-20%				yes	no	mudboil	moderate	270	
94BCW3190	469860	7238505	till	25-35	10%				yes	no	mudboil	moderate		262-264
94BCW3191	469860	7238235	till	35-45	5%				yes	no	mudboil	moderate		
94BCW3192	470937	7239179	till	25-35	5%				yes	yes	mudboil	high		
94BCW3193	473335	7239030	till	40-50	15-20%				yes	yes	mudboil	moderate	270	
94BCW3194	471908	7238989	till	20-45	15-20%				yes	yes	mudboil	high		
94BCW3195	472000	7239210	till	25-40	20-25%				yes	yes	mudboil	moderate	264	
94BCW3196	472000	7239405	till	45-50	20-25%				yes	yes	mudboil	high	265	
94BCW3197	472000	7239600	till	60-70	30%				yes	yes	mudboil	moderate		
94BCW3198	472000	7239675	till	20-30	20-25%				yes	yes	mudboil	high		
94BCW3199	472000	7239750	till	25-35	20-25%				yes	yes	mudboil	high	270	
94BCW3200	472000	7238805	till	20-40	20-25%	80.5	18.5	1.0	yes	yes	mudboil	moderate		
94BCW3201	472000	7238610	till	60-65	15-20%				yes	yes	mudboil	low to none		
94BCW3202	472000	7238410	till	30	15-20%				yes	yes	mudboil	low to none		
94BCW3203	472000	7238295	till	30-50	10-15%				yes	yes	mudboil	moderate		
94BCW3204	472000	7238195	till	55-70	20-25%				yes	yes	mudboil	low to none	268-270	
94BCW3205	456985	7237285	till	25045	25-30%				yes	yes	mudboil	moderate		
94BCW3206	460060	7237749	till	15-30	10-15%				yes	yes	mudboil	high	260	
94BCW3207	462734	7238236	till	50-60	5-10%				yes	yes	mudboil	moderate	358-360	
94BCW3208	465914	7238770	till	35-40	15-20%				yes	yes	mudboil	high	255-260	
94BCW3209	468846	7238997	till	35-50	5-10%				yes	yes	mudboil	moderate	250	
94BCW3215	476150	7238900	kimberlite						yes	yes	drill core			

APPENDIX A.2 . Pyrope and Cr-diospide abundance in selected Canamera Geological Ltd. till samples at selected distances down-ice of the Ranch Lake kimberlite

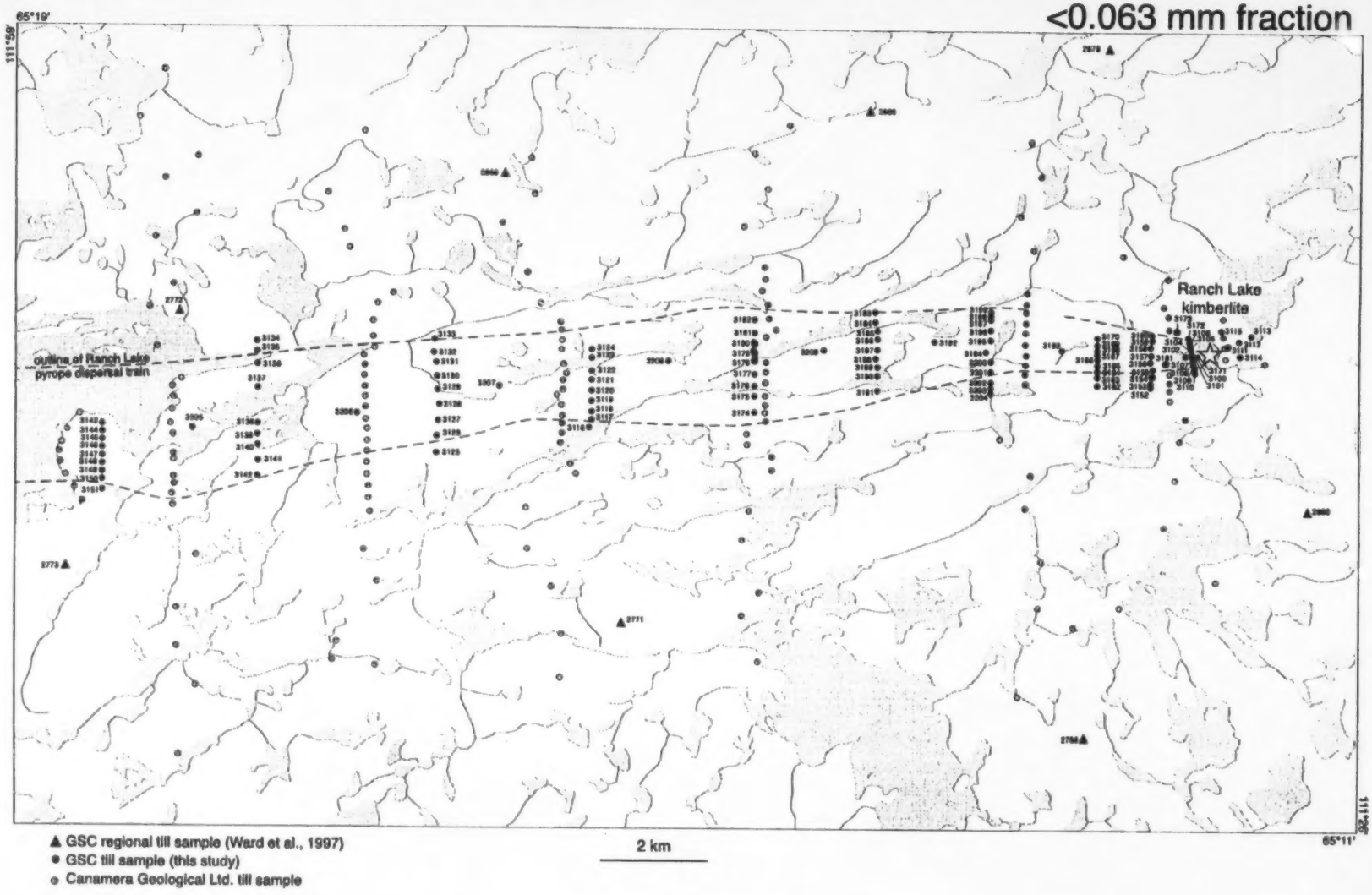
Sample	Location	Distance from kimberlite (km)	Pyrope	Cr-diopside	Ratio Cr-diopside /pyrope
5716	up-ice	0.4	0	0	
5715	up-ice	0.4	0	0	
107	up-ice	1.0	0	0	
5714	up-ice	0.4	0	0	
5718	up-ice	0.4	0	0	
23750	up-ice	0.6	0	0	
23748	up-ice	0.9	0	0	
23746	up-ice	1.2	0	0	
23804	Line 1	0.6	0	0	
6182	Line 1	0.6	0	0	
18432	Line 1	0.6	0	0	
25473	Line 1	0.6	0	0	
25386	Line 1	0.6	0	0	
5983	Line 1	0.6	0	0	
5981	Line 1	0.6	10	15	1.5
5979	Line 1	0.6	13	8	0.6
18418	Line 1	0.6	12	34	2.8
24724	Line 1	0.6	0	0	
24488	Line 1	0.6	0	0	
24489	Line 1	0.6	0	0	
24490	Line 1	0.6	0	0	
18415	Line 1	0.6	0	0	
18337	Line 1	0.6	0	0	
18339	Line 1	0.6	0	0	
15082	Line 1	0.6	0	0	
23530	Line 1	0.6	0	0	
15083	Line 1	0.6	0	0	
1894	Line 2	3.3	0	0	
24781	Line 2	3.3	0	0	
1893	Line 2	3.3	0	0	
1892	Line 2	3.3	0	0	
24639	Line 2	3.3	0	0	
23899	Line 2	3.3	0	0	
23825	Line 2	3.3	0	5	
23922	Line 2	3.3	3	1	0.3
23897	Line 2	3.3	38	44	1.2
23823	Line 2	3.3	11	27	2.5
23921	Line 2	3.3	12	39	3.3
22749	Line 2	3.3	3	9	3.0
23870	Line 2	3.3	0	0	
Steve 09	Line 2	3.3	0	0	
1888	Line 2	3.3	0	0	
1887	Line 2	3.3	0	0	
2002	Line 2	3.3	0	0	
2003	Line 2	3.3	0	0	
2004	Line 2	3.3	0	0	
1697	Line 3	8.3	0	0	
1698	Line 3	8.3	0	0	
18576	Line 3	8.3	0	0	
25401	Line 3	8.3	0	0	
16308	Line 3	8.3	0	0	
24743	Line 3	8.3	0	0	
22727	Line 3	8.3	0	0	
5898	Line 3	8.3	0	0	
5900	Line 3	8.3	1	0	
5902	Line 3	8.3	1	0	
5918	Line 3	8.3	116	147	1.3
6650	Line 3	8.3	24	32	1.3

APPENDIX A.2 . Pyrope and Cr-diospide abundance in selected Canamera Geological Ltd. till samples at selected distances down-ice of the Ranch Lake kimberlite

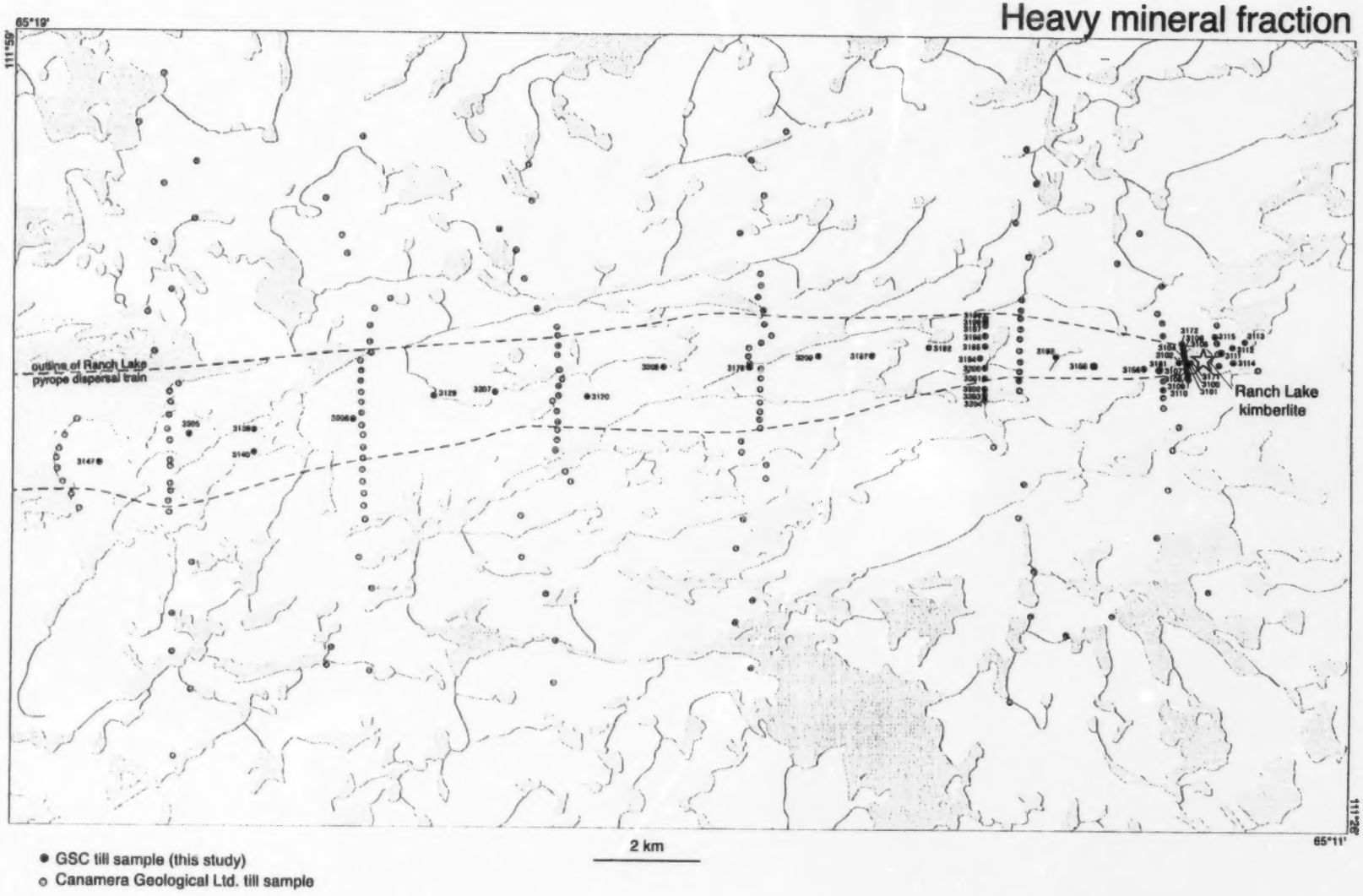
Sample	Location	Distance from kimberlite (km)	Pyrope	Cr-diopside	Ratio Cr-diopside /pyrope
6649	Line 3	8.3	38	90	2.4
6648	Line 3	8.3	65	124	1.9
5743	Line 3	8.3	21	40	1.9
5740	Line 3	8.3	107	91	0.9
5738	Line 3	8.3	6	8	1.3
5744	Line 3	8.3	2	1	0.5
5745	Line 3	8.3	0	1	
5746	Line 3	8.3	0	1	
5748	Line 3	8.3	1	0	
24753	Line 3	8.3	0	0	
24754	Line 3	8.3	0	0	
24747	Line 3	8.3	0	0	
24624	Line 3	8.3	0	0	
14889	Line 3	8.3	1	0	
14890	Line 3	8.3	0	0	
14896	Line 3	8.3	0	0	
14895	Line 3	8.3	0	0	
23637	Line 3	8.3	0	0	
24697	Line 4	12.0	0	0	
24696	Line 4	12.0	0	0	
16999	Line 4	12.0	0	0	
7027	Line 4	12.0	0	0	
7026	Line 4	12.0	0	0	
7025	Line 4	12.0	6	6	1.0
7024	Line 4	12.0	15	18	1.2
6678	Line 4	12.0	50	87	1.7
7023	Line 4	12.0	148	292	2.0
7022	Line 4	12.0	68	180	2.6
6674	Line 4	12.0	30	76	2.5
7014	Line 4	12.0	86	106	1.2
7015	Line 4	12.0	5	4	0.8
24628	Line 4	12.0	0	1	
7016	Line 4	12.0	0	0	
7017	Line 4	12.0	0	0	
1734	Line 4	12.0	0	0	
1733	Line 4	12.0	0	0	
17957	Line 5	15.5	0	0	
17956	Line 5	15.5	0	0	
17955	Line 5	15.5	0	0	
16455	Line 5	15.5	0	0	
18449	Line 5	15.5	0	0	
23936	Line 5	15.5	0	0	
23968	Line 5	15.5	0	0	
23876	Line 5	15.5	0	0	
24893	Line 5	15.5	10	33	3.3
6179	Line 5	15.5	3	15	5.0
7057	Line 5	15.5	31	40	1.3
7058	Line 5	15.5	11	42	3.8
6178	Line 5	15.5	36	56	1.6
7059	Line 5	15.5	61	113	1.9
7060	Line 5	15.5	244	348	1.4
23059	Line 5	15.5	60	104	1.7
23026	Line 5	15.5	0	1	
23060	Line 5	15.5	2	0	
23027	Line 5	15.5	2	3	1.5
20334	Line 5	15.5	0	0	
23061	Line 5	15.5	0	0	
23028	Line 5	15.5	0	0	
20335	Line 5	15.5	0	0	

APPENDIX A.2 . Pyrope and Cr-diospide abundance in selected Canamera Geological Ltd. till samples at selected distances down-ice of the Ranch Lake kimberlite

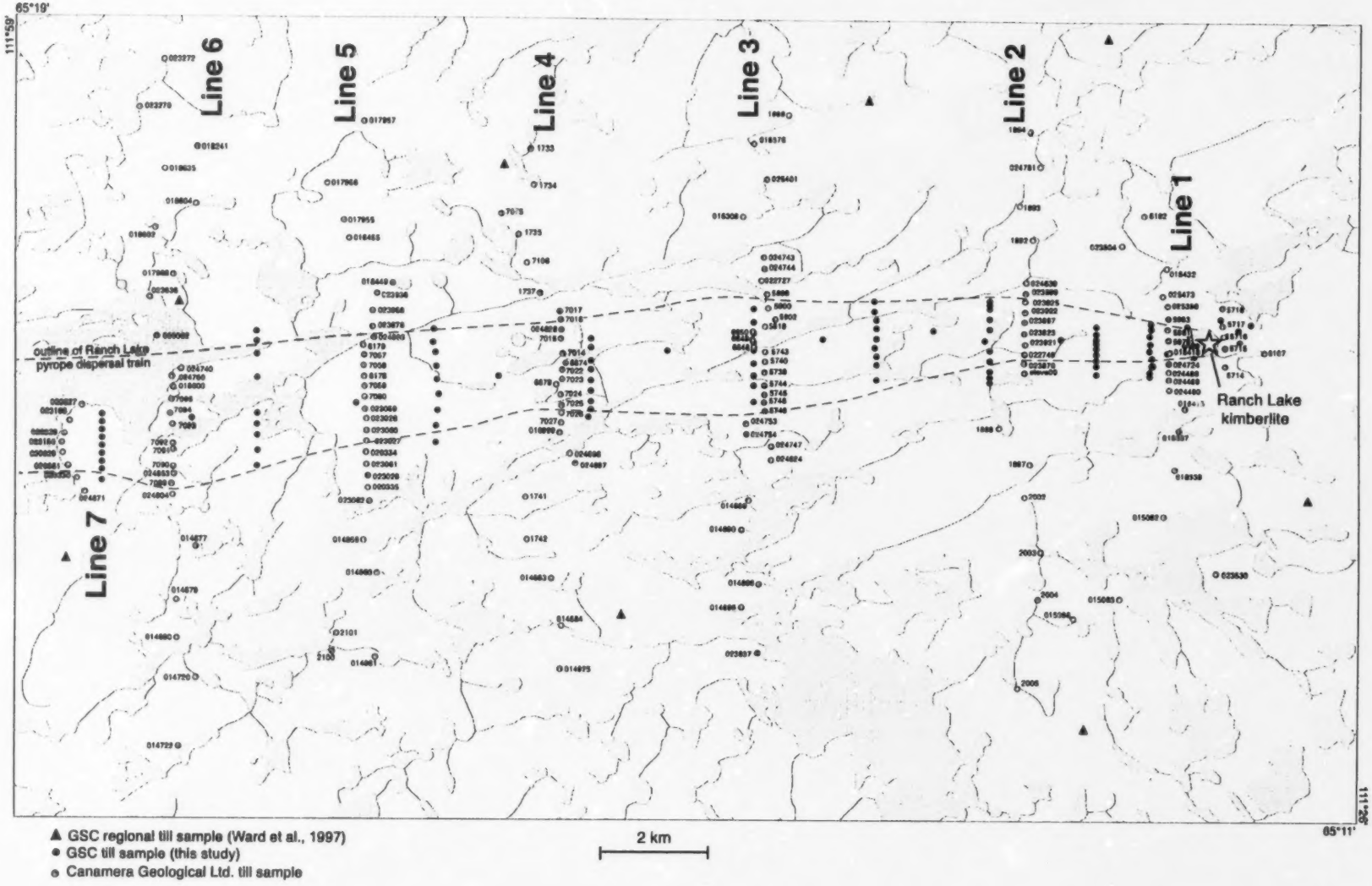
Sample	Location	Distance from kimberlite (km)	Pyrope	Cr-diopside	Ratio Cr-diopside /pyrope
23062	Line 5	15.5	0	0	
14959	Line 5	15.5	0	0	
14960	Line 5	15.5	0	0	
2101	Line 5	15.5	0	0	
2100	Line 5	15.5	0	0	
14961	Line 5	15.5	0	0	
23272	Line 6	19.3	0	0	
23270	Line 6	19.3	0	0	
18241	Line 6	19.3	0	0	
18635	Line 6	19.3	0	0	
18604	Line 6	19.3	0	0	
19602	Line 6	19.3	0	0	
17968	Line 6	19.3	0	0	
23636	Line 6	19.3	0	0	
20062	Line 6	19.3	0	0	
24740	Line 6	19.3	27	33	1.2
24760	Line 6	19.3	11	13	1.2
18600	Line 6	19.3	111	218	2.0
7095	Line 6	19.3	138	194	1.4
7094	Line 6	19.3	397	492	1.2
7093	Line 6	19.3	445	545	1.2
7092	Line 6	19.3	9	21	2.3
7091	Line 6	19.3	10	14	1.4
7090	Line 6	19.3	1	5	5.0
7089	Line 6	19.3	1	0	
24853	Line 6	19.3	1	0	
24904	Line 6	19.3	0	0	
14677	Line 6	19.3	0	0	
14679	Line 6	19.3	0	0	
14680	Line 6	19.3	0	0	
14720	Line 6	19.3	0	0	
14722	Line 6	19.3	0	0	
20327	Line 7	21.5	15	34	2.3
23166	Line 7	21.5	152	245	1.6
20328	Line 7	21.5	39	42	1.1
23150	Line 7	21.5	8	22	2.8
20329	Line 7	21.5	7	12	1.7
20351	Line 7	21.5	4	6	1.5
20330	Line 7	21.5	0	0	
24671	Line 7	21.5	0	0	
				Mean ratio Cr-diopside /pyrope	**1.9**



Appendix A. Map 1: Location of Geological Survey of Canada till samples collected for <0.063 mm fraction geochemical analysis.



Appendix A. Map 2: Location of Geological Survey of Canada till samples collected for heavy mineral analysis.



Appendix A. Map 3: Location of the selected Canamera till samples used in this study

Appendix B GSC sample processing weight data for GSC till samples

Appendix B.1 Sample processing weight data

Appendix B.2 Weight data for the 0.25 to 0.5 mm fraction

Appendix B.1 Weight of all fractions produced during sample processing by Canamera Geological Ltd.

Sample	Sieved		Magnetic separation (permaroll)				Magstream Separation			
	0.5 to 0.84 mm	0.25 to 0.5 mm	0.5 to 0.84 mm		0.25 to 0.5 mm mm		0.5 to 0.84 mm		0.25 to 0.5 mm mm	
	weight kg	weight kg	weight (g) Mag fraction	weight (g) Non-Mag fraction	weight (g) Mag fraction	weight (g) Non-Mag fraction	weight (g) light fraction	weight (g) heavy fraction	weight (g) light fraction	weight (g) heavy fraction
94BCW3100	1.1	1.5	210.0	464.0	284.0	676.0	187.27	20.49	249.46	31.63
94BCW3101	0.9	1.3	148.0	446.0	178.0	690.0	131.05	13.86	153.28	22.09
94BCW3102	1.1	1.5	102.0	173.0	124.0	185.0	84.57	14.54	99.96	20.43
94BCW3103	1.2	1.5	262.0	552.0	282.0	716.0	225.20	30.00	245.97	30.60
94BCW3104	1.0	1.4	208.0	456.0	242.0	664.0	175.50	25.75	206.48	30.72
94BCW3105	1.2	1.5	236.0	548.0	306.0	692.0	204.21	24.40	268.84	32.29
94BCW3106	0.9	1.3	166.0	316.0	212.0	642.0	140.36	19.60	180.76	26.21
94BCW3107	1.1	1.4	58.0	68.0	61.0	86.0	43.62	12.01	42.84	15.76
94BCW3108	1.3	1.5	62.0	97.0	89.0	168.0	46.78	12.75	67.86	18.37
94BCW3109	0.9	1.1	142.0	374.0	158.0	546.0	122.73	15.23	134.07	21.53
94BCW3110	1.2	1.5	200.0	524.0	222.0	752.0	172.95	21.21	188.97	29.09
94BCW3111	1.0	1.5	236.0	452.0	282.0	684.0	198.69	29.32	240.93	34.82
94BCW3112	0.9	1.4	218.0	362.0	348.0	620.0	185.11	27.45	308.97	34.04
94BCW3113	1.1	1.3	62.0	116.0	75.0	166.0	49.08	10.26	58.04	14.28
94BCW3114	1.1	1.3	83.0	146.0	90.0	169.0	66.29	13.37	70.27	17.10
94BCW3115	0.9	1.1	178.0	372.0	248.0	500.0	154.38	17.36	217.15	25.38
94BCW3120	1.1	1.5	220.0	538.0	256.0	734.0	186.38	27.26	215.31	35.86
94BCW3129	1.4	2.0	228.0	648.0	294.0	1050.0	189.28	30.09	248.52	37.45
94BCW3138	1.2	1.5	282.0	488.0	316.0	664.0	239.03	35.90	275.36	34.14
94BCW3140	0.9	1.1	226.0	422.0	208.0	522.0	189.03	28.84	173.25	28.49
94BCW3147	1.4	1.8	70.0	213.0	78.0	192.0	59.07	8.51	63.02	11.72
94BCW3156	1.0	1.5	232.0	562.0	280.0	810.0	201.65	23.79	235.08	27.43
94BCW3161	1.1	1.4	228.0	464.0	250.0	654.0	193.98	27.74	215.38	29.58
94BCW3166	1.1	1.5	216.0	576.0	240.0	820.0	187.64	22.54	206.49	28.66
94BCW3171	1.1	1.6	244.0	524.0	306.0	846.0	211.85	27.85	266.16	35.72
94BCW3172	0.9	0.1	168.0	402.0	172.0	548.0	150.62	15.19	148.64	21.76
94BCW3178	0.7	1.1	148.0	274.0	206.0	504.0	126.47	17.14	177.48	24.89
94BCW3187	0.8	1.1	142.0	370.0	174.0	550.0	129.11	11.03	153.35	18.20
94BCW3192	0.9	1.0	132.0	372.0	134.0	496.0	116.65	11.80	114.82	16.92
94BCW3193	1.1	1.4	192.0	496.0	218.0	690.0	164.34	22.94	184.88	29.22
94BCW3194	1.3	1.5	222.0	608.0	214.0	808.0	191.25	26.48	182.89	27.48
94BCW3195	1.1	1.5	204.0	520.0	220.0	770.0	173.93	24.36	187.62	26.80
94BCW3196	1.0	1.4	200.0	406.0	266.0	686.0	173.90	19.97	231.85	28.36
94BCW3197	1.3	1.7	248.0	612.0	274.0	860.0	209.84	31.30	230.80	35.08
94BCW3198	1.3	1.5	226.0	572.0	248.0	772.0	189.87	30.25	210.12	32.62
94BCW3199	1.3	1.5	234.0	598.0	216.0	764.0	191.94	31.80	179.05	30.32
94BCW3200	1.1	1.5	174.0	620.0	184.0	824.0	158.70	13.39	160.47	21.16
94BCW3201	0.9	1.4	160.0	412.0	198.0	700.0	134.94	18.89	169.92	22.47
94BCW3202	1.0	1.3	152.0	544.0	144.0	686.0	137.67	13.20	122.95	19.42
94BCW3203	0.9	1.0	154.0	386.0	214.0	534.0	130.15	18.28	190.35	19.09
94BCW3204	1.2	1.4	48.0	68.0	48.0	81.0	35.29	10.24	34.04	12.09
94BCW3205	1.3	1.4	72.0	196.0	51.0	135.0	53.24	16.39	33.51	16.02
94BCW3206	0.9	1.1	194.0	358.0	204.0	502.0	163.22	23.94	175.68	23.77
94BCW3207	0.9	1.2	50.0	62.0	59.0	88.0	37.22	10.79	42.63	14.58
94BCW3208	1.1	1.8	230.0	464.0	272.0	714.0	200.65	24.54	237.32	29.85
94BCW3209	1.1	1.4	76.0	197.0	44.0	87.0	34.09	8.10	58.82	15.09

Appendix B.2 Weight of 0.25 to 0.5 mm fraction separated using methylene iodide and picked for indicator minerals

SAMPLE	0.25 to 0.5 mm	NON-MAG HEAVY FRACTION		METHYLENE IODIDE SEPARATION SG = 3.2	
	WEIGHT NON-MAG HEAVY FRACTION (grams)	WEIGHT (not picked) (grams)	WEIGHT (picked) (grams)	< 3.2 FLOAT FRACTION WEIGHT PICKED (grams)	>3.2 HEAVY FRACTION WEIGHT PICKED (grams)
94BCW3100	31.63	--	31.63	NA	NA
94BCW3101	22.09	--	22.09	NA	NA
94BCW3102	20.43	--	20.43	NA	NA
94BCW3103	30.60	21.30	9.30	NA	NA
94BCW3104	30.72	21.92	8.80	NA	NA
94BCW3105	32.29	21.99	10.30	NA	NA
94BCW3106	26.21	16.41	9.80	NA	NA
94BCW3107	15.76	6.36	9.40	NA	NA
94BCW3108	18.37	--	18.37	NA	NA
94BCW3109	21.20			18.60	2.60
94BCW3110	28.70			24.80	3.90
94BCW3111	34.82	--	34.82	NA	NA
94BCW3112	33.60			29.90	3.70
94BCW3113	14.28	--	14.28	NA	NA
94BCW3114	16.70			13.60	3.10
94BCW3115	25.20			21.80	3.40
94BCW3120	35.86	25.76	10.10	NA	NA
94BCW3129	37.45	--	37.45	NA	NA
94BCW3138	34.14	--	34.14	NA	NA
94BCW3147	11.72	--	11.72	NA	NA
94BCW3156	27.43	--	27.43	NA	NA
94BCW3161	29.30			24.90	4.40
94BCW3166	28.50			24.30	4.20
94BCW3171	35.50			28.40	7.10
94BCW3172	21.60			18.20	3.40
94BCW3178	24.80			21.70	3.10
94BCW3187	17.90			15.60	2.30
94BCW3192	16.60			13.90	2.70
94BCW3193	28.80			24.10	4.70
94BCW3194	27.20			22.60	4.60
94BCW3195	26.60			22.60	4.00
94BCW3196	28.50			24.40	4.10
94BCW3197	34.70			29.60	5.10
94BCW3198	32.80			28.80	4.00
94BCW3199	30.30			26.30	4.00
94BCW3200	21.00			17.20	3.80
94BCW3201	22.20			19.30	2.90
94BCW3202	19.00			14.80	4.20
94BCW3203	18.80			16.20	2.60
94BCW3204	11.60			9.30	2.30
94BCW3205	15.60			12.80	2.80
94BCW3206	23.50			20.10	3.40
94BCW3207	14.30			10.80	3.50
94BCW3208	29.60			26.20	3.40
94BCW3209	14.70			12.60	2.10

NA- Methylene iodide separation not used

Appendix C. Microprobe data for mineral grains from GSC till samples

Table C.1 Microprobe operating conditions

Table C.2 Calculated detection limits and counting times

Appendix C.1 Microprobe data for all grains ... **on diskette**

Appendix C.2 Microprobe data for pyrope

Appendix C.3 Microprobe data for diopside

Appendix C.4 Microprobe data for chromite

Appendix C.5 Microprobe data for ilmenite

Appendix C.6 Microprobe data for olivine

Table C.1. Operating conditions and standards for the major element routine "GARNET".

SUMMARY OF CONDITIONS IN GARNET.EXP AND GARNET.PHY

Cosecant of the take off angle: 1.556
Total number of elements : 11
Number of analyzed elements :10

CALIBRATION DATA :

	SPC	XTAL	POS.	+BG. OFFSET	-BG. OFFSET	BG SLOPE	PK-BG C/s/nA	SIGMA	PK TIMs	%REQ. ACCUR	BG TIM ms
Na	1	PC0	26848	2500	-2500	0.00	1517.62	0.7	10	0.1	5000
K	3	PET	42757	1000	0	1.00	294.38	0.6	10	0.5	5000
Fe	4	LIF	48081	1050	0	1.00	333.18	0.3	10	0.1	5000
Mg	2	TAP	38516	1000	0	1.00	1155.93	0.2	10	0.1	5000
Si	2	TAP	27732	1500	0	1.00	1312.58	0.5	10	0.1	5000
Ca	3	PET	38389	2000	0	1.00	370.99	0.4	10	0.1	5000
Mn	4	LIF	52201	1200	0	1.00	435.75	0.2	10	0.5	4627
Ti	3	PET	31426	1000	0	1.00	803.96	0.1	10	0.1	5000
Cr	3	PET	26193	1000	0	1.00	366.95	0.1	10	0.1	5000
Al	2	TAP	32468	1000	0	1.00	1372.19	0.1	10	0.1	5000

STANDARD DATA:

	STD	WT	LINE	kV	BEAM
Na	NACL7	0.3930	Ka	20	20
K	KBR7	0.3290	Ka	20	20
Fe	MAG1	0.7236	Ka	20	20
Mg	MGO1	0.6032	Ka	20	20
Si	QTZ1	0.4674	Ka	20	20
Ca	WOL1	0.3432	Ka	20	20
Mn	MN	1.0000	Ka	20	20
Ti	RUT	0.5895	Ka	20	20
Cr	CHR1	0.2504	Ka	20	20
Al	COR1	0.5290	Ka	20	20

NACL7	**Na**	0.3930	**Cl**	0.6070								
KBR7	**K**	0.3290	**Br**	0.6710								
MAG1	**Fe**	0.7236	**O**	0.2764								
MGO1	**Mg**	0.6032	**O**	0.3968								
QTZ1	**Si**	0.4674	**O**	0.5326								
WOL1	**Ca**	0.3432	**Fe**	0.0030	**Mn**	0.0012	**Si**	0.2399	**O**	0.4127		
MN	**Mn**	1.0000										
RUT1	**Ti**	0.5895	**Fe**	0.0050	**Nb**	0.0050	**O**	0.4005				
CHR1	**Cr**	0.2504	**Al**	0.0762	**Fe**	0.2985	**Mg**	0.0434	**Ti**	0.0054	**V**	0.001
	Mn	0.0015	**Ni**	0.0012	**Si**	0.0011	**O**	0.3211				
COR1	**Al**	0.5290	**O**	0.4710								

Table C.2 Counting times for each grain and calculated minimum detection limits (MDL) for each element

ELEMENT	TIME (s)	MDL (ppm)	MDL (oxide wt %)
Na	10	300	0.04
Si	10	80	0.017
K	10	200	0.024
Fe	10	400	0.051
Al	10	100	0.019
Ca	10	200	0.028
Mn	10	400	0.052
Mg	10	200	0.033
Ti	10	200	0.033
Cr	10	200	0.029

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T704	70	94BCW3101	till	0.5-0.84	purple	Cr-pyrope	40.64	0.17	18.03	7.32	7.05	0.41	20.95	5.68	0.00	0.01	100.26
T663	73	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.63	0.17	21.94	2.43	8.13	0.40	21.49	4.42	0.02	0.02	101.64
T663	84	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.83	0.11	21.67	2.89	8.76	0.41	20.20	4.91	0.00	0.02	100.78
T663	43	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	43.40	0.22	21.29	3.60	7.88	0.42	21.93	4.63	0.04	0.00	103.41
T663	85	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.14	0.25	20.99	3.65	7.68	0.40	21.66	4.52	0.02	0.00	101.29
T663	25	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.95	0.23	20.97	3.72	7.42	0.35	21.73	4.98	0.00	0.00	102.35
T663	56	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.70	0.03	21.27	4.13	6.94	0.33	24.03	2.09	0.02	0.00	101.53
T663	87	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.47	0.32	19.72	4.45	7.93	0.36	20.48	5.18	0.02	0.00	99.93
T663	72	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.77	0.45	19.42	4.59	8.37	0.32	20.22	6.22	0.05	0.00	101.42
T663	61	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.80	0.08	20.15	4.66	7.67	0.45	20.56	5.37	0.00	0.00	100.74
T663	82	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.49	0.46	19.50	4.82	8.00	0.37	19.52	6.56	0.03	0.01	100.77
T663	69	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.12	0.45	19.62	4.88	8.19	0.43	19.76	6.45	0.05	0.03	101.97
T663	32	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.88	0.46	19.45	4.91	7.99	0.38	19.68	6.40	0.06	0.03	101.23
T663	41	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.85	0.43	19.63	4.96	8.11	0.43	20.04	6.24	0.03	0.00	101.72
T663	88	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.03	0.17	19.66	4.97	7.18	0.34	20.92	5.49	0.05	0.00	100.81
T663	35	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.39	0.19	19.79	5.09	7.27	0.37	20.87	5.44	0.00	0.00	101.40
T663	74	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.64	0.33	19.51	5.10	8.46	0.40	19.72	6.70	0.03	0.03	101.91
T663	28	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.26	0.27	19.37	5.20	7.34	0.31	21.17	5.24	0.03	0.01	101.19
T663	63	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.94	0.26	19.34	5.48	7.10	0.38	21.22	5.00	0.03	0.00	100.73
T663	70	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.80	0.42	18.84	5.50	8.56	0.47	18.61	7.44	0.01	0.01	101.66
T663	90	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.14	0.01	19.76	5.51	7.18	0.36	22.50	2.97	0.00	0.00	100.44
T663	89	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.54	0.28	19.16	5.55	7.58	0.42	20.87	5.06	0.02	0.01	100.50
T663	67	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.80	0.08	19.63	5.61	9.00	0.51	19.08	6.06	0.00	0.01	101.77
T663	53	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.98	0.09	19.89	5.80	7.86	0.61	19.68	5.72	0.00	0.01	101.65
T663	30	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.20	0.47	19.09	5.85	8.30	0.52	19.28	6.82	0.02	0.00	102.54
T663	58	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.51	0.21	19.11	5.96	7.37	0.39	20.99	5.16	0.02	0.00	100.73
T663	36	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.71	0.60	18.28	6.03	7.58	0.33	20.32	5.78	0.05	0.02	100.70
T663	60	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.76	0.02	19.23	6.07	7.52	0.42	19.90	5.86	0.02	0.01	100.79
T663	37	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.95	0.61	18.23	6.08	7.95	0.38	20.48	5.88	0.03	0.00	101.59
T663	27	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.75	0.06	19.11	6.11	7.67	0.44	20.15	5.98	0.00	0.02	101.30
T663	80	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.73	0.37	18.84	6.15	7.33	0.41	20.50	5.53	0.04	0.00	100.89
T663	54	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.93	0.46	18.54	6.32	7.71	0.44	20.84	5.32	0.07	0.00	101.62
T663	59	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.99	0.40	18.32	6.44	7.69	0.34	20.45	5.34	0.03	0.00	101.01
T663	68	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.74	0.01	19.02	6.45	7.47	0.40	20.15	5.65	0.02	0.01	100.93
T663	50	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.79	0.00	18.85	6.52	7.20	0.46	20.31	6.32	0.00	0.01	101.46
T663	57	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.13	0.22	18.72	6.52	7.13	0.37	20.81	5.82	0.01	0.01	101.73
T663	52	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.48	0.03	18.98	6.54	8.41	0.63	18.62	6.65	0.00	0.01	101.35
T663	81	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.63	0.24	18.63	6.59	6.85	0.40	20.98	5.20	0.02	0.03	100.56
T663	83	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.36	0.43	18.25	6.69	7.14	0.37	20.27	5.58	0.01	0.00	100.10
T663	39	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.48	0.62	17.55	6.69	8.44	0.50	17.65	8.83	0.02	0.00	101.78

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	62	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.72	0.00	18.98	6.69	7.26	0.43	19.78	6.00	0.02	0.03	100.91
T663	66	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.98	0.23	18.53	6.75	7.15	0.40	20.68	5.46	0.01	0.01	101.21
T663	33	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.61	0.05	18.57	6.94	7.44	0.48	20.65	5.03	0.03	0.02	100.81
T663	44	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.03	0.03	18.70	6.95	7.72	0.39	21.17	4.70	0.00	0.00	101.70
T663	49	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.73	0.01	18.74	6.96	7.99	0.46	19.40	6.23	0.00	0.00	101.52
T663	91	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.72	0.00	18.53	7.01	7.30	0.49	20.95	4.62	0.04	0.00	100.65
T663	47	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.21	0.02	18.96	7.05	7.59	0.52	20.76	4.93	0.01	0.02	102.07
T663	48	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.08	0.03	18.61	7.09	8.63	0.60	19.45	5.89	0.00	0.02	102.39
T663	38	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.70	0.02	18.42	7.14	7.55	0.43	20.90	4.85	0.00	0.00	101.01
T663	31	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	42.58	0.02	18.95	7.20	6.96	0.33	20.52	6.45	0.00	0.00	103.01
T663	76	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.98	0.12	17.88	7.31	7.63	0.39	20.26	6.27	0.00	0.01	101.86
T663	65	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.79	0.04	18.20	7.44	7.60	0.40	20.60	4.93	0.02	0.01	101.02
T663	51	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.89	0.03	18.23	7.59	7.40	0.41	19.81	6.30	0.02	0.01	101.69
T663	42	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.64	0.09	17.92	7.73	7.23	0.49	20.00	6.44	0.02	0.02	101.56
T663	78	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.73	0.00	18.24	7.90	7.33	0.43	21.30	4.47	0.01	0.00	101.41
T663	86	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.12	0.00	17.67	7.97	7.10	0.37	19.58	6.53	0.00	0.00	100.33
T663	64	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	40.34	0.27	15.53	8.00	6.84	0.37	17.35	6.04	0.00	0.01	94.75
T663	71	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.33	0.16	17.33	8.05	7.25	0.36	20.03	6.39	0.00	0.01	100.91
T663	26	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.50	0.05	17.96	8.06	7.81	0.54	19.23	6.52	0.01	0.01	101.68
T663	40	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.84	0.01	17.86	8.19	7.26	0.57	20.38	5.54	0.03	0.00	101.67
T663	92	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.29	0.01	17.40	8.23	7.15	0.49	19.65	6.32	0.03	0.00	100.55
T663	55	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.68	0.17	17.05	8.27	7.39	0.38	19.70	6.58	0.00	0.00	101.22
T663	34	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.34	0.16	17.28	8.34	7.20	0.43	20.50	5.79	0.01	0.02	101.07
T663	79	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.60	0.05	16.83	9.13	7.08	0.46	19.50	6.84	0.00	0.00	101.48
T663	29	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.34	0.06	16.90	9.23	8.02	0.45	18.78	6.84	0.00	0.00	101.63
T663	46	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.82	0.07	16.33	9.70	7.23	0.43	19.66	7.05	0.00	0.00	102.29
T663	77	94BCW3102	till	0.25-0.5	purple	Cr-pyrope	41.70	0.05	16.75	9.85	7.21	0.53	20.90	4.60	0.01	0.03	101.63
T704	77	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	41.24	0.49	19.35	4.58	7.70	0.38	21.49	4.95	0.05	0.02	100.26
T704	74	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	41.40	0.20	19.20	5.19	7.50	0.40	21.17	5.34	0.01	0.01	100.41
T704	75	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	40.70	0.26	19.27	5.22	7.75	0.35	21.64	4.96	0.02	0.01	100.17
T704	81	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	40.88	0.57	18.36	5.79	8.44	0.37	19.39	6.74	0.02	0.00	100.56
T704	79	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	42.25	0.30	17.81	6.92	7.62	0.40	19.71	5.88	0.00	0.01	100.90
T704	76	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	41.50	0.16	18.04	7.18	7.15	0.37	20.88	5.49	0.04	0.00	100.80
T704	78	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	41.21	0.25	18.10	7.27	7.15	0.45	21.17	5.50	0.04	0.00	101.14
T704	80	94BCW3102	till	0.5-0.84	purple	Cr-pyrope	41.46	0.04	17.41	8.60	7.25	0.47	20.08	5.78	0.01	0.00	101.10
T664	20	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	42.18	0.51	20.16	4.64	8.00	0.39	20.25	6.45	0.02	0.00	102.60
T664	21	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	41.92	0.31	19.94	4.75	8.12	0.40	20.27	6.23	0.01	0.00	101.94
T664	19	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	42.20	0.07	20.01	5.89	7.45	0.50	20.73	5.72	0.04	0.00	102.61
T664	13	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	42.51	0.03	20.19	6.03	7.22	0.47	23.43	2.40	0.00	0.01	102.29
T664	17	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	41.19	0.10	19.28	6.24	7.84	0.46	20.73	5.16	0.02	0.00	101.02

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	15	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	41.68	0.03	19.23	6.70	7.00	0.41	20.28	6.16	0.00	0.00	101.47
T664	14	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	41.28	0.05	18.82	7.20	7.71	0.47	19.33	6.56	0.00	0.00	101.42
T664	18	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	40.97	0.03	18.80	7.35	8.01	0.53	19.58	6.38	0.01	0.00	101.66
T664	16	94BCW3103	till	0.25-0.5	purple	Cr-pyrope	40.44	0.36	16.92	8.25	7.71	0.39	19.73	6.62	0.01	0.00	100.43
T705	3	94BCW3103	till	0.5-0.84	purple	Cr-pyrope	41.59	0.04	21.04	3.81	8.26	0.52	20.45	5.21	0.01	0.00	100.93
T705	2	94BCW3103	till	0.5-0.84	purple	Cr-pyrope	41.08	0.41	19.42	5.69	7.67	0.42	21.72	4.80	0.04	0.02	101.26
T705	4	94BCW3103	till	0.5-0.84	purple	Cr-pyrope	41.66	0.17	18.32	6.92	7.82	0.36	20.36	5.34	0.04	0.00	101.00
T705	1	94BCW3103	till	0.5-0.84	purple	Cr-pyrope	40.79	0.46	17.62	7.16	7.46	0.36	20.60	5.81	0.04	0.01	100.30
T664	46	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	42.39	0.29	22.02	2.46	8.21	0.46	21.60	4.36	0.01	0.00	101.80
T664	53	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.79	0.16	21.77	3.29	8.45	0.46	20.01	5.89	0.00	0.00	101.82
T664	56	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	42.71	0.02	21.04	4.94	7.15	0.36	23.34	2.71	0.03	0.00	102.29
T664	52	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.65	0.06	20.16	5.05	7.66	0.44	20.51	5.50	0.02	0.02	101.07
T664	57	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.84	0.37	19.66	5.08	8.80	0.41	18.51	7.60	0.00	0.01	102.27
T664	45	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.67	0.27	19.64	5.32	8.06	0.41	20.18	6.15	0.04	0.02	101.76
T664	48	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.61	0.05	19.30	6.66	8.04	0.56	19.40	6.57	0.00	0.01	102.20
T664	42	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.24	0.04	19.01	6.84	7.81	0.50	19.58	6.26	0.01	0.00	101.30
T664	44	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	42.19	0.03	18.66	7.47	6.99	0.38	20.61	5.68	0.00	0.00	102.02
T664	51	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.50	0.06	16.59	7.71	6.77	0.37	19.08	6.35	0.00	0.02	98.44
T664	41	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.17	0.11	17.95	7.84	7.22	0.34	20.35	6.13	0.00	0.00	101.11
T664	49	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.31	0.03	18.46	7.91	7.47	0.55	22.24	2.81	0.00	0.00	100.78
T664	47	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.87	0.14	18.00	7.95	7.27	0.41	20.49	6.12	0.02	0.01	102.28
T664	43	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	41.10	0.11	17.45	8.11	7.00	0.36	20.16	6.28	0.03	0.00	100.59
T664	50	94BCW3104	till	0.25-0.5	purple	Cr-pyrope	40.69	0.42	14.15	12.06	7.75	0.36	18.17	7.86	0.00	0.02	101.48
T705	17	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	41.10	0.03	19.99	4.99	7.52	0.43	21.12	5.24	0.02	0.01	100.44
T705	24	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	42.14	0.04	20.38	4.99	7.08	0.44	23.42	2.58	0.00	0.01	101.07
T705	25	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	40.99	0.03	19.24	5.06	9.45	0.56	19.28	5.61	0.01	0.00	100.24
T705	18	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	41.14	0.11	18.37	6.48	7.31	0.41	20.39	5.68	0.02	0.01	99.92
T705	23	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	41.30	0.38	17.65	7.31	7.46	0.43	20.28	5.72	0.03	0.00	100.54
T705	22	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	42.44	0.60	16.99	7.83	7.67	0.35	20.22	6.12	0.02	0.02	102.25
T705	20	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	41.00	0.10	17.46	7.94	7.69	0.41	19.93	6.31	0.00	0.00	100.83
T705	19	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	17.42	8.31	7.92	0.53	19.26	6.59	0.00	0.00	101.22
T705	21	94BCW3104	till	0.5-0.84	purple	Cr-pyrope	40.97	0.08	16.58	9.12	7.53	0.55	18.89	6.78	0.00	0.00	100.49
T664	96	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.91	0.31	20.45	4.13	8.12	0.39	20.45	5.98	0.02	0.00	101.76
T664	102	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.68	0.56	19.77	4.49	8.49	0.43	19.66	6.38	0.04	0.00	101.49
T664	101	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.84	0.37	19.87	4.68	8.20	0.46	19.78	6.32	0.01	0.01	101.53
T664	107	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.89	0.17	19.97	5.22	7.47	0.37	21.31	5.19	0.04	0.02	101.64
T664	97	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.50	0.57	19.22	5.25	7.98	0.47	19.19	7.32	0.04	0.00	101.54
T664	90	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	40.75	0.04	18.74	5.41	7.01	0.44	19.86	5.32	0.00	0.01	97.57
T664	87	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	40.81	0.24	19.26	5.78	7.44	0.41	21.01	5.00	0.03	0.00	99.98
T664	84	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.80	0.07	19.82	5.82	7.16	0.36	21.37	5.40	0.01	0.00	101.81

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	89	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	40.46	0.02	19.21	5.95	7.05	0.39	20.36	5.52	0.00	0.00	98.96
T664	88	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	40.00	0.13	18.88	6.21	7.37	0.42	20.34	5.53	0.00	0.02	98.88
T664	95	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.22	0.02	19.64	6.28	7.83	0.47	19.35	6.49	0.00	0.00	101.30
T664	98	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.68	0.32	18.59	6.74	7.27	0.35	20.57	6.17	0.02	0.02	101.71
T664	94	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.73	0.02	18.97	6.94	6.88	0.52	21.37	4.53	0.03	0.01	100.99
T664	85	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.52	0.02	19.26	7.01	6.98	0.48	20.94	5.17	0.00	0.00	101.38
T664	86	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.14	0.17	18.39	7.17	6.90	0.37	20.69	5.88	0.01	0.00	100.73
T664	93	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.30	0.02	18.79	7.40	7.39	0.47	20.85	4.65	0.00	0.00	100.87
T664	99	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.28	0.04	18.36	7.57	7.55	0.50	20.40	5.51	0.02	0.00	101.25
T664	106	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.56	0.22	18.02	7.83	7.16	0.41	20.55	6.20	0.03	0.00	101.98
T664	92	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	40.79	0.28	17.17	8.04	7.36	0.40	19.62	6.65	0.00	0.01	100.32
T664	103	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.40	0.41	17.83	8.04	7.11	0.37	20.35	6.15	0.03	0.00	101.70
T664	91	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.02	0.01	17.87	8.16	7.39	0.44	19.37	6.60	0.00	0.00	100.86
T664	105	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.21	0.03	17.65	8.77	7.09	0.44	20.86	5.19	0.01	0.00	101.25
T664	83	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.30	0.07	17.16	9.01	7.27	0.43	19.36	7.26	0.01	0.01	101.86
T664	100	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.22	0.02	17.22	9.25	7.04	0.40	20.43	6.15	0.00	0.01	101.72
T664	104	94BCW3105	till	0.25-0.5	purple	Cr-pyrope	41.34	0.05	16.54	10.33	6.40	0.46	21.14	5.11	0.00	0.00	101.36
T705	46	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	40.57	0.36	17.78	4.67	8.48	0.47	18.16	6.61	0.03	0.00	97.14
T705	42	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	41.75	0.27	19.24	5.41	7.55	0.37	21.24	5.13	0.00	0.00	100.96
T705	45	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	42.18	0.03	19.82	5.48	7.73	0.52	21.41	3.96	0.00	0.00	101.14
T705	44	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	41.81	0.01	18.76	6.70	7.07	0.43	21.56	4.68	0.00	0.01	101.03
T705	41	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	41.98	0.20	17.77	7.44	7.27	0.43	20.74	5.67	0.02	0.01	101.51
T705	43	94BCW3105	till	0.5-0.84	purple	Cr-pyrope	41.30	0.27	17.39	8.21	6.81	0.39	20.31	5.85	0.01	0.01	100.54
T665	2	94BCW3107	till	0.25-0.5	purple	Cr-pyrope	41.77	0.02	18.29	7.82	7.38	0.47	20.85	4.81	0.02	0.01	101.44
T705	66	94BCW3107	till	0.5-0.84	purple	Cr-pyrope	41.94	0.17	20.38	3.96	7.37	0.39	21.74	4.90	0.01	0.01	100.87
T665	50	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.73	0.43	20.93	3.38	8.35	0.33	20.60	5.70	0.04	0.01	102.50
T665	82	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.72	0.23	21.09	3.40	7.59	0.37	21.45	4.67	0.06	0.03	101.57
T665	34	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.34	0.38	20.03	4.02	7.99	0.40	20.95	5.33	0.00	0.00	101.44
T665	47	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.91	0.42	20.46	4.32	7.64	0.43	21.20	5.53	0.01	0.03	102.95
T665	69	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.77	0.37	19.46	4.56	8.55	0.43	18.78	7.19	0.00	0.01	101.10
T665	38	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.23	0.30	19.95	4.62	7.54	0.33	21.21	5.31	0.01	0.01	101.52
T665	84	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.32	0.25	19.92	4.67	7.66	0.35	20.56	5.26	0.05	0.03	101.05
T665	87	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.98	0.26	20.00	4.70	7.31	0.34	21.57	4.98	0.03	0.01	101.19
T665	43	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.41	0.35	19.22	4.76	8.64	0.45	18.95	6.85	0.03	0.02	100.67
T665	42	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.48	0.54	19.88	4.81	8.01	0.53	20.35	5.57	0.05	0.01	102.24
T665	85	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.46	0.27	20.19	5.01	7.01	0.39	21.69	5.12	0.07	0.01	102.20
T665	36	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.06	0.23	19.60	5.03	7.59	0.37	20.93	5.46	0.05	0.00	101.31
T665	70	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.48	0.38	19.45	5.05	7.70	0.35	20.95	5.66	0.02	0.00	101.05
T665	59	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.42	0.32	19.30	5.14	7.68	0.36	20.79	5.59	0.02	0.01	100.62
T665	30	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.72	0.23	19.80	5.16	7.38	0.40	21.32	5.16	0.04	0.00	101.19

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	29	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.54	0.42	19.38	5.20	7.11	0.38	21.44	5.46	0.01	0.00	101.94
T665	79	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.98	0.43	19.13	5.24	8.17	0.39	20.22	5.71	0.02	0.02	101.31
T665	60	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.85	0.20	19.70	5.27	7.56	0.44	21.03	5.10	0.06	0.01	101.22
T665	40	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.10	0.34	19.02	5.30	8.41	0.35	19.27	6.28	0.00	0.00	101.07
T665	51	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.16	0.26	19.51	5.30	7.20	0.42	21.25	5.46	0.00	0.00	101.56
T665	46	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.73	0.33	19.67	5.50	8.25	0.40	19.81	6.25	0.01	0.00	102.96
T665	76	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.37	0.23	19.18	5.54	7.70	0.38	20.61	5.71	0.01	0.00	101.73
T665	39	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.99	0.17	19.75	5.67	7.14	0.40	21.62	5.06	0.00	0.00	102.80
T665	66	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.59	0.02	20.14	5.72	7.45	0.48	22.43	3.55	0.02	0.00	102.38
T665	56	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.11	0.07	19.65	5.76	8.54	0.59	19.57	5.51	0.01	0.00	101.81
T665	77	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.93	0.42	19.02	5.79	6.94	0.33	21.06	5.55	0.04	0.00	101.08
T665	88	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.15	0.50	18.88	5.82	7.49	0.42	20.42	5.57	0.06	0.00	100.31
T665	48	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.60	0.23	18.84	5.93	8.13	0.45	20.12	5.24	0.00	0.00	100.53
T665	37	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.81	0.15	19.32	5.97	6.95	0.38	21.55	5.21	0.02	0.00	101.36
T665	35	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.72	0.40	18.77	6.03	8.00	0.50	20.73	5.32	0.04	0.01	101.50
T665	86	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.63	0.24	19.21	6.12	7.25	0.32	21.28	5.10	0.03	0.00	102.17
T665	44	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.45	0.67	17.99	6.18	7.75	0.37	20.28	5.63	0.07	0.00	101.39
T665	27	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.14	0.19	18.85	6.28	7.38	0.37	20.74	5.88	0.03	0.00	101.86
T665	81	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.55	0.22	18.89	6.28	7.26	0.42	21.09	5.39	0.05	0.01	101.16
T665	83	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.46	0.27	18.40	6.40	7.35	0.36	20.69	5.38	0.05	0.00	100.36
T665	57	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	18.50	6.47	7.23	0.40	20.29	5.71	0.09	0.01	100.54
T665	49	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.71	0.32	18.29	6.50	7.71	0.34	19.90	6.33	0.04	0.01	101.13
T665	33	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.04	0.32	18.16	6.67	9.19	0.29	18.05	6.95	0.04	0.02	100.73
T665	68	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.67	0.49	18.72	6.73	7.70	0.48	20.70	5.53	0.09	0.02	103.13
T665	63	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	43.14	0.29	18.73	6.75	7.57	0.39	21.22	5.92	0.05	0.00	104.06
T665	80	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	40.83	0.40	17.45	6.81	7.19	0.36	20.06	5.81	0.03	0.01	98.96
T665	89	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.10	0.65	17.50	7.02	7.84	0.42	18.44	7.89	0.05	0.00	100.90
T665	61	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.13	0.42	17.65	7.18	7.45	0.43	20.27	5.80	0.05	0.01	100.39
T665	26	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.19	0.01	18.81	7.18	7.51	0.54	23.26	1.84	0.00	0.00	101.34
T665	28	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	40.78	0.21	17.49	7.32	10.31	0.53	17.79	6.71	0.05	0.00	101.20
T665	67	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.60	0.37	17.76	7.34	7.22	0.41	20.46	5.91	0.04	0.00	101.11
T665	72	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.66	0.04	18.22	7.39	7.52	0.47	21.09	4.62	0.00	0.00	101.00
T665	64	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.92	0.42	17.93	7.41	7.06	0.40	20.50	5.74	0.07	0.00	101.43
T665	32	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.94	0.39	17.87	7.46	7.14	0.38	20.65	5.96	0.00	0.00	101.79
T665	31	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.32	0.33	17.58	7.47	7.89	0.34	20.38	6.11	0.04	0.02	102.49
T665	55	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.03	0.05	17.49	7.64	7.00	0.45	20.56	5.15	0.01	0.00	99.37
T665	78	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.92	0.08	18.30	7.73	7.54	0.57	22.18	2.99	0.00	0.01	101.31
T665	41	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.36	0.26	17.43	7.96	7.00	0.39	20.27	5.80	0.01	0.00	100.47
T665	52	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.82	0.15	17.81	8.03	7.26	0.43	19.79	6.51	0.02	0.01	101.82
T665	53	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.99	0.11	17.40	8.06	6.88	0.42	20.09	6.47	0.01	0.00	101.43

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T685	61	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.50	0.26	20.56	3.39	7.24	0.38	21.55	4.82	0.02	0.01	99.73
T685	102	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.99	0.17	20.40	3.67	8.05	0.38	21.33	4.61	0.02	0.01	99.62
T685	79	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.81	0.24	20.49	3.70	7.52	0.41	21.37	4.67	0.02	0.00	99.22
T685	64	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.04	0.15	20.26	3.89	8.21	0.41	20.89	4.64	0.02	0.01	99.52
T685	101	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.33	0.31	20.31	3.89	7.58	0.34	21.01	4.48	0.05	0.01	99.32
T685	84	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.43	0.24	20.17	3.98	7.59	0.38	21.54	4.56	0.01	0.01	99.91
T685	53	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.74	0.39	19.70	4.19	7.46	0.36	21.56	4.95	0.03	0.02	100.38
T685	71	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.39	0.08	19.88	4.31	7.83	0.43	20.62	5.08	0.00	0.00	99.62
T685	87	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.62	0.35	19.60	4.38	7.78	0.44	21.14	4.79	0.03	0.00	99.13
T685	91	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.96	0.46	19.22	4.40	8.02	0.43	19.13	6.67	0.02	0.00	99.30
T685	81	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.95	0.44	18.98	4.47	8.50	0.35	20.39	5.23	0.00	0.01	99.32
T685	55	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.22	0.35	19.32	4.48	8.00	0.40	19.55	5.73	0.03	0.00	98.08
T685	85	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.53	0.32	19.30	4.61	8.43	0.42	18.68	6.70	0.00	0.00	98.99
T685	74	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.96	0.55	18.87	4.69	8.09	0.36	20.51	5.17	0.04	0.00	99.24
T685	66	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.33	0.26	19.35	4.70	7.81	0.43	20.65	5.53	0.03	0.00	100.07
T685	59	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.69	0.10	19.37	4.77	7.33	0.36	20.81	5.23	0.00	0.01	98.67
T685	70	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.50	0.33	19.00	4.78	8.56	0.50	18.64	7.10	0.03	0.00	99.44
T685	52	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.22	0.39	18.88	4.89	8.48	0.41	19.12	6.67	0.02	0.00	99.06
T685	80	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.36	0.42	18.71	4.95	8.21	0.39	19.40	6.21	0.04	0.01	99.69
T685	98	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.47	0.21	19.40	4.99	7.41	0.43	21.23	4.61	0.02	0.00	99.76
T685	65	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.64	0.44	18.92	5.12	8.03	0.37	19.63	6.03	0.03	0.00	99.22
T685	94	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.33	0.20	19.23	5.19	7.58	0.39	21.01	4.92	0.04	0.02	99.91
T685	83	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.06	0.56	18.71	5.20	7.77	0.47	18.75	7.18	0.03	0.00	98.72
T685	51	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.13	0.12	18.10	5.35	11.86	0.62	16.61	6.58	0.00	0.00	99.37
T685	73	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.67	0.30	18.59	5.53	8.13	0.39	19.80	6.14	0.00	0.00	99.55
T685	57	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.41	0.28	18.81	5.54	6.73	0.38	21.16	5.36	0.01	0.00	99.68
T685	68	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.45	0.35	18.62	5.66	8.26	0.37	20.26	5.44	0.04	0.00	99.45
T685	50	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.77	0.30	18.74	5.66	7.09	0.36	20.95	5.28	0.01	0.00	99.17
T685	93	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.15	0.52	18.33	5.80	7.32	0.36	20.64	5.36	0.01	0.02	98.52
T685	60	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.59	0.24	18.75	5.98	7.39	0.41	20.88	5.06	0.01	0.00	99.28
T685	69	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.11	0.53	18.21	6.04	7.78	0.37	19.71	6.38	0.01	0.01	99.14
T685	109	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.80	0.29	18.58	6.17	6.88	0.41	21.18	5.46	0.03	0.01	99.81
T685	67	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.13	0.31	18.05	6.34	8.26	0.38	19.88	6.24	0.01	0.01	99.61
T685	88	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.72	0.27	17.86	6.41	7.90	0.40	19.81	6.16	0.01	0.00	99.53
T685	90	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.37	0.36	18.33	6.42	7.35	0.45	20.64	5.16	0.03	0.01	100.13
T685	82	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.12	0.23	18.10	6.46	7.33	0.35	20.70	5.34	0.02	0.00	99.64
T685	62	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.70	0.24	18.32	6.47	7.02	0.41	20.89	5.24	0.03	0.02	99.32
T685	92	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.18	0.63	17.28	6.47	8.14	0.34	19.95	5.69	0.05	0.00	98.75
T685	78	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.46	0.29	17.54	6.50	10.77	0.63	17.55	6.02	0.01	0.01	99.77
T685	105	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.17	0.11	17.95	6.93	7.09	0.39	20.42	5.82	0.00	0.00	98.88

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	54	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	42.47	0.04	17.96	8.58	6.53	0.40	21.69	4.58	0.04	0.00	102.29
T665	62	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.64	0.27	16.72	8.62	7.27	0.41	19.98	6.35	0.03	0.00	101.29
T665	71	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.57	0.51	16.01	9.48	7.41	0.37	19.76	6.71	0.01	0.01	101.84
T665	75	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	41.26	0.70	15.36	9.97	7.73	0.41	18.76	7.51	0.03	0.00	101.73
T665	74	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	40.99	0.25	15.89	9.98	7.38	0.44	19.36	6.39	0.02	0.02	100.72
T665	58	94BCW3120	till	0.25-0.5	purple	Cr-pyrope	40.13	0.59	14.61	10.26	7.97	0.36	18.52	7.25	0.01	0.01	99.72
T705	78	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.51	0.36	20.85	3.23	8.24	0.38	21.31	4.28	0.06	0.00	100.22
T705	97	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.91	0.26	20.22	3.39	7.76	0.42	21.40	4.82	0.01	0.00	99.18
T705	89	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.83	0.24	19.95	4.04	7.74	0.44	21.62	5.18	0.00	0.00	101.05
T705	87	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.73	0.32	19.90	4.09	8.30	0.44	20.75	5.29	0.01	0.01	100.84
T705	76	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.65	0.12	20.11	4.34	7.31	0.42	21.70	4.97	0.02	0.01	100.63
T705	94	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.69	0.43	19.60	4.40	7.78	0.51	21.10	4.77	0.05	0.00	100.32
T705	86	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.22	0.32	19.44	4.46	8.54	0.41	19.13	6.47	0.02	0.00	99.99
T705	84	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.75	0.08	20.27	4.69	7.72	0.36	21.02	4.96	0.02	0.00	100.87
T705	72	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.71	0.16	19.48	4.99	8.69	0.54	18.42	6.54	0.01	0.00	100.54
T705	79	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.92	0.38	19.08	5.08	8.03	0.45	20.09	6.22	0.03	0.02	100.30
T705	98	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.73	0.24	18.77	5.09	8.65	0.43	19.00	6.65	0.00	0.00	99.55
T705	77	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.08	0.38	19.03	5.12	8.54	0.42	20.57	5.03	0.04	0.00	100.21
T705	92	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.66	0.19	19.48	5.21	7.28	0.36	21.53	4.82	0.04	0.00	100.56
T705	75	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.80	0.54	18.77	5.56	6.75	0.35	21.56	5.37	0.02	0.01	99.73
T705	96	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.26	0.02	19.51	5.70	7.79	0.52	20.83	4.55	0.01	0.00	100.18
T705	71	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.41	0.02	18.95	5.94	7.99	0.47	19.35	6.02	0.00	0.01	99.15
T705	81	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.31	0.00	18.85	6.18	7.35	0.39	20.56	5.89	0.00	0.01	100.53
T705	70	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.66	0.01	18.80	6.39	7.84	0.47	19.15	6.05	0.01	0.01	99.39
T705	90	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.65	0.00	18.61	6.56	8.22	0.55	19.16	5.78	0.00	0.01	99.54
T705	83	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.66	0.38	18.03	6.58	7.30	0.39	20.85	5.58	0.03	0.01	99.80
T705	95	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	18.63	6.61	7.55	0.53	21.05	4.75	0.00	0.01	100.32
T705	91	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.21	0.00	18.62	6.78	7.60	0.47	21.34	4.29	0.00	0.02	100.33
T705	73	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.13	0.58	17.32	6.88	7.70	0.46	18.48	7.78	0.03	0.00	99.36
T705	85	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.97	0.02	18.19	6.98	8.28	0.49	19.60	5.97	0.00	0.00	101.50
T705	82	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.04	0.37	17.82	7.25	7.29	0.41	20.62	5.62	0.04	0.00	100.45
T705	93	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.50	0.03	18.16	7.32	7.88	0.57	19.90	5.70	0.00	0.00	100.05
T705	99	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.75	0.36	17.48	7.39	7.00	0.34	20.79	5.56	0.03	0.01	99.71
T705	88	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	40.92	0.48	17.05	8.09	6.72	0.37	20.39	5.96	0.03	0.00	100.00
T705	80	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	41.35	0.00	17.59	8.59	7.03	0.41	22.91	2.79	0.00	0.02	100.69
T705	74	94BCW3120	till	0.5-0.84	purple	Cr-pyrope	39.57	0.31	15.26	9.67	10.68	0.64	16.92	6.90	0.01	0.00	99.96
T665	45	94BCW3120	till	0.25-0.5	pink	Pyrope	42.80	0.19	22.64	1.84	7.90	0.46	21.74	4.68	0.04	0.00	102.30
T685	56	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.58	0.11	21.39	2.29	7.85	0.35	21.32	4.23	0.02	0.00	99.14
T685	100	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.35	0.13	20.66	3.24	7.51	0.33	21.36	4.68	0.02	0.00	99.27
T685	77	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.65	0.34	20.44	3.33	7.71	0.32	21.16	4.79	0.01	0.00	98.75

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T685	89	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.69	0.59	17.46	6.94	7.42	0.41	20.43	5.82	0.04	0.00	99.79
T685	54	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.11	0.44	17.20	7.00	8.46	0.49	18.23	7.36	0.02	0.00	99.32
T685	48	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.94	0.22	17.79	7.06	6.52	0.35	20.70	5.61	0.00	0.00	99.18
T685	86	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.11	0.27	17.78	7.21	7.13	0.38	20.58	5.71	0.00	0.01	99.17
T685	75	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.23	0.50	17.18	7.25	7.62	0.43	20.03	5.84	0.03	0.01	100.12
T685	103	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.46	0.24	17.62	7.35	7.32	0.42	20.00	5.76	0.00	0.00	99.17
T685	49	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.37	0.14	17.75	7.35	7.14	0.43	20.40	5.24	0.04	0.00	99.86
T685	63	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.01	0.37	17.34	7.58	6.60	0.36	20.36	6.01	0.00	0.01	99.64
T685	96	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.61	0.34	17.37	7.64	6.71	0.39	19.97	5.81	0.00	0.01	98.85
T685	99	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.45	0.18	17.36	7.69	6.94	0.35	20.23	5.67	0.03	0.02	98.92
T685	76	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.94	0.45	16.84	7.92	6.54	0.34	20.42	5.58	0.02	0.02	99.06
T685	95	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.57	0.36	16.67	8.01	7.15	0.40	19.78	5.85	0.04	0.00	98.82
T685	107	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.38	0.18	17.22	8.03	6.83	0.35	20.11	5.90	0.00	0.02	99.01
T685	104	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.09	0.36	16.65	8.08	7.98	0.46	18.74	6.79	0.01	0.00	99.16
T685	108	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.95	0.36	16.65	8.30	6.87	0.32	19.94	6.15	0.00	0.03	99.56
T685	58	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.28	0.30	16.01	8.30	10.99	0.48	16.79	6.96	0.02	0.00	99.13
T685	106	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.82	0.24	16.63	8.38	7.06	0.43	20.07	5.85	0.01	0.00	99.50
T685	97	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.98	0.07	16.78	8.40	7.37	0.42	20.17	5.58	0.00	0.00	98.77
T685	72	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.81	0.06	16.17	9.64	6.96	0.43	19.75	5.98	0.01	0.01	98.81
T686	6	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	20.14	3.51	7.71	0.36	21.15	4.94	0.00	0.01	99.68
T686	3	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.83	0.14	20.70	3.79	7.63	0.43	21.70	4.26	0.05	0.01	100.53
T686	45	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.93	0.01	20.29	4.33	6.71	0.40	21.73	4.55	0.02	0.00	98.97
T686	68	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.87	0.08	20.04	4.67	7.24	0.41	20.64	4.83	0.00	0.00	98.78
T686	13	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.34	0.49	18.95	4.90	7.97	0.44	19.12	6.79	0.04	0.00	100.04
T686	25	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.08	0.00	19.50	5.07	7.86	0.52	19.62	5.69	0.00	0.00	99.34
T686	11	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.29	0.31	19.10	5.10	8.42	0.43	19.37	6.52	0.01	0.01	99.55
T686	63	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.69	0.03	19.53	5.15	7.87	0.54	19.77	5.13	0.00	0.01	98.72
T686	5	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.93	0.39	18.88	5.25	7.37	0.35	20.67	5.24	0.03	0.01	99.11
T686	75	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.09	0.22	18.86	5.68	7.36	0.45	20.78	4.85	0.05	0.00	99.33
T686	18	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.86	0.38	18.60	5.75	7.38	0.41	20.59	5.08	0.06	0.00	99.11
T686	79	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.73	0.00	19.26	5.82	7.68	0.51	20.55	4.42	0.01	0.01	100.00
T686	74	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.32	0.31	18.81	5.83	7.08	0.44	21.07	5.07	0.03	0.00	99.96
T686	10	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.14	0.31	18.42	5.85	7.62	0.36	20.59	5.56	0.01	0.00	99.86
T686	69	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.05	0.01	19.00	5.88	7.59	0.54	19.78	5.59	0.01	0.01	99.44
T686	53	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.08	0.10	18.88	5.93	7.59	0.42	19.47	6.11	0.01	0.00	98.57
T686	28	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.48	0.12	18.85	6.12	7.43	0.43	20.27	5.38	0.02	0.03	100.11
T686	57	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.97	0.02	19.03	6.20	7.65	0.57	20.83	4.45	0.02	0.01	99.74
T686	17	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.47	0.02	18.84	6.20	7.30	0.42	20.89	5.16	0.03	0.01	100.33
T686	66	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.84	0.00	18.72	6.22	7.93	0.54	19.72	5.85	0.00	0.00	99.82
T686	40	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.59	0.24	18.62	6.22	7.07	0.42	20.80	5.43	0.01	0.00	100.39

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T686	81	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.12	0.21	18.32	6.33	7.09	0.35	20.81	5.54	0.01	0.02	99.78
T686	80	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.23	0.09	18.73	6.39	7.03	0.42	20.74	5.10	0.00	0.01	99.74
T686	12	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	38.12	0.57	17.17	6.39	7.55	0.42	18.73	7.08	0.05	0.00	96.08
T686	16	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.33	0.21	18.45	6.42	6.87	0.39	20.77	5.55	0.00	0.01	98.99
T686	59	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.73	0.01	18.76	6.47	7.98	0.53	19.32	5.98	0.00	0.00	99.78
T686	61	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.65	0.06	18.78	6.51	8.21	0.61	18.72	5.78	0.03	0.01	99.36
T686	82	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.22	0.38	17.95	6.55	7.26	0.32	20.29	5.54	0.05	0.01	99.56
T686	85	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.07	0.32	18.13	6.55	6.90	0.43	20.89	5.42	0.00	0.01	99.71
T686	7	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.83	0.11	17.94	6.68	7.57	0.35	20.34	5.91	0.00	0.02	99.73
T686	84	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.22	0.00	18.53	6.84	7.32	0.50	21.82	3.45	0.01	0.01	99.68
T686	38	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.76	0.28	17.87	6.92	7.60	0.40	20.47	5.82	0.00	0.00	100.11
T686	42	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.68	0.16	17.67	6.95	6.84	0.37	20.22	6.06	0.00	0.02	98.96
T686	8	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.62	0.21	17.86	7.01	7.10	0.33	20.44	5.80	0.00	0.01	99.37
T686	14	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.70	0.21	17.82	7.12	7.75	0.53	19.98	5.58	0.00	0.00	98.69
T686	71	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.00	0.15	17.79	7.13	7.27	0.40	19.99	6.08	0.01	0.00	98.83
T686	9	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.42	0.40	17.42	7.26	8.14	0.38	19.30	6.25	0.01	0.01	99.57
T686	78	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.07	0.03	18.22	7.27	7.35	0.51	20.66	4.87	0.00	0.00	98.97
T686	29	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.97	0.00	18.08	7.33	7.37	0.50	20.72	4.75	0.00	0.00	99.71
T686	65	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.32	0.02	17.81	7.33	7.32	0.51	19.12	5.93	0.00	0.01	99.36
T686	31	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.84	0.05	18.14	7.42	7.43	0.43	19.50	6.29	0.00	0.00	100.10
T686	64	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.88	0.39	17.30	7.44	6.96	0.34	20.42	5.65	0.03	0.00	99.40
T686	27	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.75	0.07	17.61	7.49	6.91	0.35	20.66	5.59	0.00	0.02	100.44
T686	67	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.45	0.08	17.76	7.51	7.17	0.42	19.89	5.90	0.00	0.00	100.19
T686	1	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.24	0.35	17.26	7.62	7.31	0.42	19.89	6.01	0.01	0.01	99.12
T686	48	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.67	0.00	18.05	7.65	7.13	0.46	23.24	2.26	0.00	0.00	100.45
T686	44	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.17	0.00	17.72	7.65	8.26	0.60	18.85	6.35	0.00	0.01	99.60
T686	46	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.57	0.00	18.07	7.77	7.24	0.47	22.15	2.68	0.00	0.00	98.95
T686	36	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.85	0.06	17.23	7.78	6.89	0.37	20.83	5.71	0.00	0.00	99.72
T686	72	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.59	0.00	17.51	7.82	7.06	0.42	19.75	6.07	0.00	0.01	99.22
T686	52	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.69	0.18	17.27	7.87	7.25	0.47	19.89	5.50	0.02	0.02	99.14
T686	58	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.07	0.04	17.37	7.88	7.12	0.43	20.45	5.62	0.01	0.00	99.97
T686	73	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.26	0.03	17.35	8.04	6.88	0.39	18.99	6.65	0.01	0.01	98.61
T686	2	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.95	0.58	16.54	8.10	8.24	0.45	18.38	7.36	0.01	0.01	99.60
T686	70	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.51	0.27	16.86	8.22	6.87	0.39	20.09	5.83	0.02	0.00	100.05
T686	35	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.02	0.04	17.31	8.30	7.85	0.58	18.72	6.67	0.00	0.00	99.48
T686	51	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.31	0.00	17.29	8.35	6.76	0.40	20.69	5.02	0.02	0.01	99.85
T686	86	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.53	0.46	16.54	8.38	7.42	0.44	19.61	6.55	0.01	0.01	99.94
T686	60	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.54	0.24	16.97	8.38	6.78	0.35	20.26	5.99	0.00	0.01	99.51
T686	30	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.45	0.35	16.49	8.42	7.45	0.41	19.54	6.29	0.01	0.00	99.40
T686	41	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.77	0.14	16.96	8.44	7.11	0.39	20.34	5.61	0.02	0.01	99.80

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T686	76	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.61	0.10	16.89	8.45	6.78	0.40	20.55	5.31	0.02	0.02	99.12
T686	77	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.72	0.06	17.01	8.45	8.25	0.61	17.44	7.54	0.00	0.00	99.08
T686	43	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.88	0.10	17.38	8.54	7.03	0.44	20.15	5.93	0.01	0.01	100.47
T686	34	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.00	0.22	16.79	8.59	6.92	0.37	20.40	5.79	0.04	0.01	100.13
T686	39	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.77	0.01	16.80	8.62	7.02	0.43	19.36	6.49	0.00	0.00	98.50
T686	15	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.77	0.03	15.69	8.78	7.33	0.41	18.80	5.36	0.03	0.08	96.29
T686	50	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.24	0.00	16.66	8.84	7.81	0.54	18.21	6.77	0.00	0.01	99.08
T686	83	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.29	0.00	16.87	8.86	7.64	0.41	20.22	5.14	0.00	0.01	99.43
T686	55	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	41.26	0.12	16.43	8.89	6.77	0.43	20.02	5.75	0.02	0.01	99.69
T686	62	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.54	0.08	16.58	8.97	7.45	0.40	19.39	5.69	0.01	0.01	99.13
T686	37	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.94	0.32	16.19	8.98	7.38	0.36	19.52	6.31	0.00	0.01	100.00
T686	32	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.88	0.06	16.02	9.06	7.22	0.39	19.68	6.70	0.00	0.01	99.04
T686	54	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.91	0.05	16.22	9.27	6.84	0.39	19.13	6.63	0.01	0.00	99.46
T686	47	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.05	0.01	16.81	9.37	7.36	0.55	22.41	2.60	0.00	0.00	99.15
T686	26	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.51	0.00	16.23	9.50	6.92	0.38	19.01	6.57	0.03	0.00	99.16
T686	33	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.87	0.12	16.18	9.62	6.92	0.43	19.95	5.81	0.05	0.01	98.96
T686	56	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	39.82	0.36	15.68	9.67	6.77	0.43	20.05	6.35	0.06	0.00	99.18
T686	49	94BCW3129	till	0.25-0.5	purple	Cr-pyrope	40.71	0.36	15.26	10.28	6.50	0.40	19.97	6.44	0.02	0.02	99.95
T706	57	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.19	0.14	21.08	2.82	8.11	0.42	20.89	4.43	0.03	0.02	99.12
T706	58	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.68	0.17	20.54	3.89	7.54	0.36	21.92	4.89	0.03	0.00	100.02
T706	52	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.26	0.17	20.02	4.21	7.74	0.41	21.46	4.67	0.03	0.01	99.97
T706	53	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.97	0.34	18.98	5.10	8.44	0.45	19.27	6.44	0.04	0.02	100.04
T706	56	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.89	0.43	19.17	5.17	7.92	0.43	20.85	4.96	0.03	0.02	99.87
T706	55	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.68	0.00	19.71	5.19	7.63	0.43	20.74	5.36	0.00	0.00	99.74
T706	50	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.14	0.10	19.63	5.36	7.95	0.47	20.11	5.73	0.00	0.00	100.48
T706	62	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.18	0.02	19.51	5.62	7.93	0.48	19.95	5.78	0.00	0.00	100.47
T706	61	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	39.61	0.11	18.73	6.86	7.26	0.50	20.09	4.93	0.02	0.01	98.11
T706	60	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.02	0.39	17.81	6.95	7.15	0.41	20.55	5.79	0.03	0.00	100.09
T706	63	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	42.87	0.37	17.65	7.25	7.72	0.41	20.37	5.81	0.04	0.00	102.49
T706	54	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.81	0.03	17.63	7.93	7.67	0.55	19.53	5.65	0.00	0.01	99.81
T706	49	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.91	0.05	17.50	8.17	7.04	0.40	19.71	6.30	0.00	0.01	100.10
T706	51	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	41.02	0.37	16.81	8.20	6.96	0.37	20.03	5.94	0.03	0.01	99.74
T706	59	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.63	0.10	16.64	9.49	7.00	0.43	20.42	5.64	0.00	0.02	100.37
T706	48	94BCW3129	till	0.5-0.84	purple	Cr-pyrope	40.43	0.08	16.00	9.99	7.02	0.43	19.68	6.81	0.01	0.00	100.45
T686	4	94BCW3129	till	0.25-0.5	purple	pyrope	41.54	0.36	21.53	1.92	9.13	0.36	20.77	4.08	0.06	0.00	99.76
T688	21	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.50	0.15	21.10	2.99	8.76	0.49	20.47	4.48	0.01	0.00	99.94
T688	66	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.68	0.30	20.81	3.05	7.73	0.44	21.78	4.32	0.02	0.00	100.13
T688	65	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	42.31	0.27	20.95	3.20	7.81	0.43	21.24	4.37	0.02	0.00	100.59
T688	62	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	42.05	0.31	20.31	3.37	7.69	0.35	20.91	4.95	0.03	0.01	99.98
T688	72	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.75	0.00	20.78	3.40	7.96	0.37	21.09	4.62	0.01	0.02	98.99

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T688	57	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.95	0.12	20.66	3.57	8.03	0.46	20.70	4.66	0.01	0.00	99.16
T688	59	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.24	0.35	19.44	4.12	8.18	0.40	19.97	5.56	0.00	0.00	98.26
T688	26	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.50	0.11	20.23	4.17	6.82	0.38	21.37	4.81	0.00	0.00	99.40
T688	63	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.44	0.22	19.57	4.29	8.00	0.46	20.60	5.21	0.00	0.00	99.78
T688	77	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.69	0.41	19.12	4.34	7.53	0.40	21.10	5.16	0.04	0.00	98.78
T688	67	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.80	0.35	19.61	4.45	7.91	0.37	20.37	5.80	0.00	0.00	99.67
T688	71	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	42.02	0.54	19.59	4.50	6.66	0.34	21.37	4.83	0.02	0.02	99.89
T688	54	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.85	0.31	19.44	4.51	8.21	0.40	19.85	5.63	0.02	0.00	99.22
T688	68	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.71	0.34	19.30	4.60	8.02	0.34	20.99	5.15	0.00	0.00	100.44
T688	74	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.53	0.42	19.08	4.62	8.24	0.47	19.85	5.82	0.01	0.00	99.05
T688	36	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.32	0.37	18.91	4.67	8.63	0.39	18.79	6.75	0.04	0.01	98.88
T688	58	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.50	0.35	19.23	4.68	7.82	0.48	20.46	5.47	0.02	0.00	99.02
T688	95	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.62	0.46	19.19	4.73	7.31	0.34	20.82	5.09	0.03	0.01	99.59
T688	53	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.12	0.46	18.85	4.76	7.81	0.36	20.68	5.12	0.05	0.00	99.22
T688	76	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.42	0.46	19.00	4.77	8.06	0.40	19.39	6.29	0.03	0.01	99.82
T688	51	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.85	0.35	18.77	4.78	8.39	0.41	18.77	6.74	0.00	0.00	98.05
T688	42	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.38	0.27	19.38	4.97	7.04	0.40	21.06	5.11	0.04	0.01	98.66
T688	92	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.52	0.00	20.00	5.06	6.92	0.32	23.29	2.31	0.00	0.00	99.41
T688	52	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.20	0.36	18.79	5.18	6.93	0.42	21.37	5.20	0.06	0.00	99.50
T688	87	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.54	0.63	18.49	5.19	9.00	0.45	19.31	5.56	0.03	0.00	99.22
T688	60	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.89	0.10	18.81	5.23	7.41	0.36	20.19	5.31	0.01	0.02	98.31
T688	88	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.40	0.36	18.66	5.24	8.29	0.36	18.91	6.76	0.03	0.00	99.00
T688	56	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.13	0.18	18.67	5.30	7.82	0.35	19.44	5.89	0.01	0.02	97.81
T688	48	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.91	0.33	18.57	5.36	8.55	0.45	19.43	6.28	0.01	0.00	99.87
T688	16	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.62	0.00	19.36	5.37	7.60	0.43	20.34	5.30	0.03	0.01	99.04
T688	73	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.25	0.35	18.65	5.37	7.49	0.38	20.63	5.41	0.01	0.00	98.54
T688	4	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.88	0.00	19.49	5.38	7.22	0.41	22.54	3.08	0.02	0.00	100.02
T688	37	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.72	0.25	18.87	5.48	7.41	0.40	20.70	4.87	0.00	0.00	97.71
T688	40	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.08	0.35	18.43	5.53	8.25	0.42	19.91	5.82	0.01	0.00	98.79
T688	78	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.51	0.48	18.56	5.55	7.17	0.38	20.74	4.91	0.00	0.01	98.31
T688	33	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.95	0.43	18.56	5.56	7.57	0.47	20.53	5.10	0.05	0.02	98.23
T688	99	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.92	0.24	18.39	5.56	8.16	0.34	19.35	6.05	0.03	0.01	98.05
T688	55	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.53	0.46	18.59	5.57	7.03	0.38	21.30	5.33	0.05	0.01	100.24
T688	85	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.51	0.04	19.34	5.60	7.11	0.36	21.00	5.44	0.02	0.02	99.44
T688	79	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.89	0.30	18.53	5.62	7.53	0.32	20.26	5.41	0.00	0.01	98.87
T688	11	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.71	0.04	18.95	5.64	7.99	0.51	19.28	5.89	0.00	0.00	98.01
T688	35	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.91	0.22	18.33	5.67	7.70	0.40	20.06	6.05	0.00	0.00	98.33
T688	96	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.47	0.11	18.84	5.73	7.64	0.40	19.46	6.44	0.01	0.00	99.10
T688	38	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.09	0.37	18.16	5.83	7.46	0.37	21.41	5.43	0.00	0.00	100.12
T688	34	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.56	0.01	18.85	5.94	7.57	0.47	20.00	5.58	0.00	0.01	98.98

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T688	69	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.71	0.79	17.59	5.94	8.20	0.36	20.49	5.38	0.02	0.00	99.49
T688	50	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.40	0.40	18.33	5.98	6.70	0.39	20.85	5.36	0.03	0.01	99.44
T688	28	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.90	0.12	18.50	6.08	7.44	0.46	20.40	5.09	0.03	0.00	99.00
T688	31	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.57	0.30	17.92	6.13	7.51	0.36	20.42	5.25	0.02	0.01	98.49
T688	61	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.15	0.41	17.91	6.20	7.93	0.34	19.68	5.85	0.02	0.01	99.49
T688	84	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.08	0.44	18.19	6.22	6.76	0.41	21.05	5.51	0.05	0.00	99.72
T688	19	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.22	0.31	18.19	6.23	7.36	0.37	20.64	5.48	0.01	0.00	98.81
T688	6	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.19	0.04	18.58	6.25	7.55	0.45	19.55	5.91	0.00	0.01	99.54
T688	27	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.04	0.36	18.13	6.26	8.30	0.41	19.66	5.99	0.00	0.00	100.15
T688	23	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.69	0.46	17.94	6.33	7.60	0.45	20.22	5.89	0.02	0.01	99.61
T688	8	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.96	0.12	18.65	6.34	7.01	0.40	20.44	5.98	0.00	0.00	99.89
T688	83	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.75	0.02	18.67	6.35	8.02	0.47	19.58	5.33	0.00	0.01	99.20
T688	81	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.51	0.28	17.69	6.42	7.87	0.35	20.45	5.73	0.01	0.01	100.32
T688	43	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.25	0.34	17.84	6.42	7.58	0.35	20.39	5.71	0.01	0.01	99.90
T688	89	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.87	0.00	18.92	6.46	6.80	0.43	21.12	5.70	0.00	0.00	100.30
T688	24	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.08	0.38	17.86	6.48	7.86	0.46	19.60	6.25	0.02	0.01	98.99
T688	39	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.25	0.52	17.54	6.49	7.88	0.44	18.81	7.31	0.04	0.00	99.29
T688	70	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.98	0.47	18.06	6.52	7.28	0.40	20.43	5.58	0.04	0.01	99.77
T688	12	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.77	0.00	18.82	6.55	7.13	0.53	22.54	2.61	0.00	0.02	98.96
T688	75	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.72	0.35	17.34	6.56	7.45	0.41	19.59	5.51	0.02	0.01	97.95
T688	29	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.62	0.32	17.97	6.60	7.17	0.39	20.68	5.29	0.03	0.01	99.09
T688	41	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.71	0.23	17.95	6.60	7.19	0.36	20.42	5.61	0.02	0.02	99.11
T688	80	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.28	0.43	17.94	6.64	7.17	0.37	20.83	5.65	0.03	0.00	100.33
T688	98	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.05	0.03	18.02	6.72	7.78	0.41	19.78	6.01	0.02	0.01	98.82
T688	46	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.76	0.30	18.15	6.77	7.19	0.43	20.49	5.39	0.02	0.00	99.50
T688	64	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.28	0.00	18.22	6.92	8.29	0.51	18.83	6.57	0.00	0.00	100.63
T688	47	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.72	0.00	18.12	7.00	7.04	0.41	20.03	6.06	0.01	0.00	99.40
T688	3	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.73	0.01	18.18	7.07	7.02	0.37	20.31	5.92	0.02	0.00	100.64
T688	10	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.28	0.03	18.37	7.12	7.24	0.56	21.02	4.32	0.00	0.00	98.93
T688	97	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.57	0.00	18.30	7.31	6.73	0.39	22.46	3.16	0.00	0.01	98.94
T688	20	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.55	0.18	17.54	7.43	7.07	0.39	20.60	5.77	0.01	0.00	100.54
T688	45	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.19	0.35	17.14	7.52	7.57	0.41	19.57	6.20	0.03	0.04	100.01
T688	49	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.59	0.18	17.51	7.53	6.89	0.37	20.46	5.68	0.00	0.01	99.22
T688	9	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.13	0.09	17.62	7.57	7.23	0.37	20.55	5.43	0.04	0.00	99.04
T688	2	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.02	0.08	17.94	7.60	7.64	0.56	20.03	4.87	0.00	0.00	99.75
T688	90	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.79	0.45	16.56	7.80	7.45	0.40	19.99	6.04	0.04	0.02	98.53
T688	86	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	41.52	0.15	17.10	8.01	7.77	0.51	19.98	5.59	0.06	0.00	100.69
T688	13	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.76	0.04	17.32	8.18	8.04	0.56	18.92	6.64	0.00	0.02	99.47
T688	17	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.41	0.22	16.88	8.37	7.21	0.43	19.99	5.78	0.02	0.00	98.31
T688	91	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.59	0.47	16.22	8.43	7.19	0.36	19.87	6.13	0.03	0.01	99.30

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T688	15	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.80	0.17	16.80	8.45	7.16	0.42	19.96	5.79	0.02	0.00	99.57
T688	5	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.85	0.05	16.97	8.49	7.77	0.60	18.30	6.99	0.00	0.00	99.03
T688	25	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.13	0.32	16.67	8.53	7.04	0.38	20.09	5.71	0.06	0.02	98.95
T688	32	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.67	0.00	16.63	8.64	6.91	0.41	20.10	5.96	0.01	0.00	98.31
T688	18	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.07	0.04	16.86	8.76	7.00	0.45	19.54	6.49	0.02	0.00	99.23
T688	14	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.13	0.00	16.96	8.76	6.86	0.42	20.52	5.14	0.00	0.00	98.80
T688	7	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.90	0.17	16.52	8.83	7.20	0.49	20.02	5.69	0.03	0.02	98.85
T688	22	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.61	0.22	15.43	8.94	11.81	0.62	15.47	7.59	0.00	0.02	99.71
T688	93	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.43	0.34	16.30	9.00	7.08	0.42	19.78	6.07	0.03	0.01	99.43
T688	1	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	42.01	0.00	17.11	9.10	6.72	0.34	22.53	3.18	0.00	0.00	101.01
T688	30	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.85	0.03	15.69	9.56	7.98	0.47	19.11	6.21	0.00	0.02	98.92
T688	94	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	38.91	0.49	14.87	10.06	7.36	0.39	19.21	7.07	0.02	0.01	98.40
T688	82	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.62	0.08	15.82	10.12	6.86	0.45	20.04	5.43	0.02	0.00	99.45
T688	44	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	40.29	0.39	15.04	10.16	7.42	0.41	19.61	6.79	0.02	0.02	100.13
T688	100	94BCW3138	till	0.25-0.5	purple	Cr-pyrope	39.83	0.23	15.30	10.66	6.95	0.41	19.62	6.42	0.01	0.00	99.41
T707	12	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.52	0.26	19.97	3.76	7.79	0.38	21.28	4.92	0.02	0.00	99.90
T707	10	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	40.76	0.36	19.12	5.00	8.70	0.43	18.91	6.80	0.00	0.01	100.10
T707	3	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.54	0.29	19.35	5.38	6.96	0.27	21.24	4.95	0.02	0.02	100.03
T707	9	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	40.72	0.46	19.00	5.41	7.59	0.39	21.25	5.26	0.03	0.00	100.11
T707	11	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.11	0.34	18.74	5.70	7.48	0.37	21.55	4.93	0.05	0.00	100.28
T707	8	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	40.96	0.41	18.37	5.79	8.34	0.44	19.74	6.11	0.05	0.08	100.28
T707	5	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.56	0.00	18.92	6.33	7.50	0.37	20.11	6.02	0.00	0.01	100.84
T707	5b	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	40.92	0.05	19.11	6.44	7.48	0.42	20.41	5.90	0.00	0.01	100.73
T707	1	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.37	0.00	18.49	6.53	9.89	0.68	18.30	5.89	0.00	0.01	101.16
T707	4	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	42.39	0.40	18.40	6.78	7.28	0.38	20.89	5.53	0.03	0.00	102.07
T707	7	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.64	0.59	17.34	6.92	8.10	0.41	20.57	5.84	0.04	0.01	101.43
T707	2	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	41.48	0.05	17.90	7.42	7.13	0.46	20.72	5.87	0.00	0.00	101.04
T707	6	94BCW3138	till	0.5-0.84	purple	Cr-pyrope	40.90	0.02	17.37	8.46	6.87	0.43	19.82	6.78	0.00	0.00	100.63
T666	65	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.63	0.31	20.63	3.69	7.76	0.32	21.51	5.01	0.03	0.03	100.91
T666	68	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.44	0.26	20.21	4.10	7.38	0.36	21.56	4.95	0.04	0.00	100.30
T666	74	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.45	0.41	20.04	4.10	7.64	0.36	21.52	5.31	0.02	0.01	100.85
T666	61	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.72	0.60	19.92	4.19	7.45	0.32	21.22	5.14	0.06	0.01	100.62
T666	57	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.91	0.25	20.59	4.33	7.75	0.38	21.32	4.76	0.04	0.01	101.33
T666	84	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.55	0.40	20.18	4.47	7.97	0.36	20.33	6.18	0.02	0.01	101.48
T666	63	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.80	0.35	19.90	4.48	7.95	0.38	19.57	5.95	0.04	0.28	99.68
T666	73	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.35	0.52	20.26	4.60	7.36	0.44	21.34	4.97	0.08	0.01	100.92
T666	48	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.59	0.33	19.97	4.64	7.97	0.37	20.57	5.64	0.00	0.00	101.07
T666	66	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.94	0.38	19.70	4.72	8.68	0.43	18.62	7.14	0.01	0.01	100.63
T666	40	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.27	0.04	20.40	4.86	7.85	0.43	20.50	5.24	0.03	0.01	100.62
T666	58	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.96	0.24	20.05	4.86	7.88	0.37	20.44	6.00	0.04	0.02	101.84

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	64	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.37	0.39	19.73	4.87	8.25	0.37	19.80	6.25	0.05	0.01	101.09
T666	71	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.68	0.22	19.49	5.12	7.50	0.38	20.64	5.44	0.01	0.01	99.51
T666	59	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.32	0.40	19.38	5.18	8.55	0.48	19.00	7.22	0.01	0.00	101.53
T666	72	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.86	0.20	19.09	5.26	12.18	0.68	16.75	6.86	0.00	0.01	101.88
T666	79	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	42.21	0.32	18.92	5.61	7.44	0.35	19.81	6.11	0.23	0.08	101.08
T666	37	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.76	0.01	19.83	5.87	6.90	0.40	22.06	3.72	0.00	0.00	100.55
T666	55	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.73	0.72	18.75	5.94	8.13	0.41	19.36	6.62	0.06	0.00	101.72
T666	42	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.51	0.00	19.74	5.95	7.35	0.45	20.05	5.92	0.00	0.00	100.97
T666	47	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.87	0.33	18.90	6.00	7.67	0.35	20.69	5.81	0.01	0.02	101.65
T666	53	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.63	0.06	19.70	6.03	8.00	0.39	19.84	6.48	0.01	0.00	102.14
T666	70	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.22	0.17	19.19	6.05	7.27	0.39	20.98	5.31	0.02	0.01	100.62
T666	52	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.00	0.22	18.78	6.11	7.70	0.37	20.23	5.80	0.00	0.00	100.20
T666	56	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.43	0.49	18.71	6.12	8.16	0.40	19.48	6.89	0.03	0.00	101.69
T666	81	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.19	0.55	18.62	6.17	8.39	0.50	19.60	5.81	0.07	0.00	100.90
T666	54	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.79	0.21	18.76	6.20	7.68	0.40	19.33	7.77	0.02	0.00	102.15
T666	69	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.58	0.02	19.74	6.21	7.07	0.47	22.26	3.21	0.00	0.01	100.57
T666	75	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	18.86	6.33	7.69	0.35	20.41	5.84	0.03	0.00	101.45
T666	62	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	39.19	0.11	17.55	6.46	13.50	0.73	15.17	6.87	0.00	0.00	99.59
T666	60	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.82	0.22	18.52	6.48	7.52	0.41	20.12	5.95	0.02	0.00	101.05
T666	41	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.91	0.05	18.94	6.67	7.51	0.46	20.04	6.22	0.02	0.00	100.82
T666	45	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.31	0.33	18.52	6.76	8.29	0.43	19.57	6.35	0.02	0.00	101.59
T666	85	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.87	0.01	18.80	6.99	7.20	0.44	20.24	5.75	0.00	0.01	100.31
T666	67	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.18	0.21	18.25	7.05	7.09	0.39	20.69	5.73	0.01	0.00	100.58
T666	50	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.69	0.02	19.07	7.14	7.59	0.54	19.66	6.18	0.00	0.00	101.89
T666	78	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.48	0.39	18.32	7.17	6.85	0.37	20.96	5.74	0.06	0.02	101.35
T666	35	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.81	0.03	19.15	7.37	7.44	0.51	22.90	2.36	0.00	0.01	101.58
T666	51	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.42	0.49	17.92	7.54	7.09	0.37	20.36	6.20	0.03	0.00	101.41
T666	83	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.25	0.29	17.75	7.97	7.09	0.41	20.44	6.15	0.04	0.02	101.42
T666	82	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.90	0.00	17.59	8.23	6.76	0.44	20.11	6.21	0.04	0.01	100.29
T666	38	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.98	0.41	17.17	8.26	7.02	0.42	19.87	6.25	0.01	0.00	100.38
T666	80	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.59	0.76	16.70	8.30	8.79	0.47	18.36	7.27	0.05	0.02	101.30
T666	49	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.60	0.04	18.12	8.30	7.11	0.42	19.89	6.77	0.00	0.00	102.24
T666	34	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.65	0.32	17.12	8.32	7.23	0.39	20.05	6.06	0.07	0.00	100.20
T666	46	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	41.37	0.41	17.09	8.32	7.23	0.38	20.01	6.57	0.01	0.01	101.40
T666	36	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.61	0.07	17.56	8.34	6.99	0.36	19.43	6.60	0.00	0.01	99.97
T666	44	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.90	0.47	16.87	8.55	6.20	0.36	20.59	5.96	0.06	0.01	99.95
T666	33	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.99	0.03	17.82	8.58	6.99	0.47	20.89	5.22	0.00	0.01	101.00
T666	43	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.51	0.08	17.27	8.78	7.63	0.51	19.06	6.73	0.01	0.01	100.58
T666	77	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.34	0.43	16.42	8.93	7.28	0.33	19.90	6.07	0.04	0.01	99.73
T666	39	94BCW3147	till	0.25-0.5	purple	Cr-pyrope	40.63	0.07	16.29	9.68	7.16	0.37	19.58	6.60	0.01	0.01	100.41

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T707	41	94BCW3147	till	0.5-0.84	purple	Cr-pyrope	41.83	0.16	21.35	2.58	8.66	0.55	21.83	4.33	0.04	0.01	101.34
T707	36	94BCW3147	till	0.5-0.84	orange	Cr-pyrope	40.83	0.42	19.56	4.05	8.62	0.31	20.59	5.45	0.02	0.01	99.87
T707	40	94BCW3147	till	0.5-0.84	purple	Cr-pyrope	41.37	0.13	19.72	4.63	7.42	0.37	21.51	5.16	0.02	0.00	100.32
T707	37	94BCW3147	till	0.5-0.84	purple	Cr-pyrope	41.68	0.11	19.76	4.64	7.86	0.41	21.00	5.37	0.00	0.01	100.84
T707	38	94BCW3147	till	0.5-0.84	purple	Cr-pyrope	41.68	0.34	18.81	5.54	7.17	0.35	21.33	5.40	0.01	0.01	100.65
T707	39	94BCW3147	till	0.5-0.84	purple	Cr-pyrope	40.75	0.11	17.58	8.05	7.12	0.34	19.63	6.52	0.00	0.00	100.09
T690	42	94BCW3156	till	0.25-0.5	red	Cr-pyrope	41.27	0.61	20.06	3.15	7.54	0.36	21.19	4.67	0.04	0.01	98.89
T690	23	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.45	0.21	20.77	3.28	7.79	0.33	21.79	4.45	0.01	0.00	100.08
T690	37	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.33	0.10	20.69	3.44	7.82	0.44	20.90	4.55	0.00	0.00	99.27
T690	33	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.79	0.43	20.34	3.57	7.56	0.45	21.23	4.30	0.05	0.02	98.72
T690	27	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.71	0.23	20.50	3.64	7.59	0.39	21.64	4.54	0.02	0.01	100.27
T690	25	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.60	0.36	20.17	3.72	8.59	0.43	20.68	4.58	0.03	0.00	100.15
T690	43	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.24	0.36	19.68	3.88	7.24	0.37	21.19	4.81	0.02	0.02	98.82
T690	7	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.73	0.13	20.21	4.13	6.80	0.41	21.33	4.79	0.01	0.02	99.56
T690	48	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.65	0.01	20.42	4.17	7.96	0.42	20.09	5.36	0.00	0.02	100.09
T690	40	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	39.77	0.37	18.97	4.51	8.20	0.47	18.73	6.62	0.00	0.01	97.65
T690	18	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.11	0.34	19.41	4.67	7.24	0.38	20.66	4.80	0.02	0.00	98.63
T690	28	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.76	0.18	19.58	4.68	7.40	0.37	21.04	4.93	0.01	0.00	99.94
T690	16	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.43	0.23	19.54	4.82	7.24	0.40	21.18	4.75	0.01	0.00	99.60
T690	57	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.31	0.24	19.31	4.83	7.18	0.43	21.59	4.58	0.02	0.00	98.48
T690	36	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.96	0.22	19.11	4.86	7.46	0.35	20.55	5.05	0.00	0.02	98.56
T690	30	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.67	0.04	20.08	4.87	6.82	0.37	22.63	3.00	0.00	0.00	99.48
T690	21	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.74	0.13	19.05	4.92	7.39	0.38	20.49	5.26	0.00	0.01	99.36
T690	34	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.16	0.27	19.38	4.92	7.34	0.38	21.07	4.99	0.03	0.00	99.54
T690	44	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.81	0.28	19.22	5.11	7.03	0.39	20.81	5.26	0.01	0.00	98.91
T690	35	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.81	0.37	18.74	5.13	8.45	0.41	19.04	6.40	0.00	0.01	99.35
T690	39	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.60	0.19	19.29	5.18	7.12	0.42	21.32	4.72	0.03	0.01	98.88
T690	19	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.52	0.48	18.54	5.28	7.20	0.33	20.78	5.35	0.03	0.00	99.51
T690	38	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.02	0.42	18.32	5.47	8.04	0.42	18.87	6.65	0.01	0.01	98.23
T690	49	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.90	0.26	19.15	5.56	7.51	0.40	20.89	4.98	0.03	0.00	100.68
T690	24	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.99	0.38	18.46	5.57	8.21	0.39	19.60	6.20	0.01	0.00	99.80
T690	54	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.81	0.05	19.10	6.02	6.93	0.42	20.47	5.67	0.00	0.01	99.49
T690	31	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.19	0.24	18.25	6.05	7.69	0.42	20.37	5.53	0.02	0.00	99.76
T690	5	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.88	0.00	19.09	6.12	7.40	0.47	20.66	5.34	0.00	0.00	99.96
T690	29	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.46	0.00	18.64	6.35	7.06	0.38	20.00	5.83	0.00	0.01	99.72
T690	10	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.70	0.20	18.35	6.40	6.99	0.37	20.09	5.72	0.00	0.00	98.82
T690	56	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.14	0.18	18.31	6.46	7.03	0.38	20.58	5.39	0.01	0.01	99.48
T690	26	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.70	0.34	18.11	6.47	7.24	0.38	20.74	5.49	0.00	0.00	100.48
T690	51	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.67	0.08	18.58	6.49	8.14	0.56	19.28	5.93	0.00	0.02	99.75
T690	1	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.30	0.05	18.77	6.50	7.54	0.45	19.83	6.11	0.00	0.01	100.56

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T690	22	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.57	0.29	18.27	6.58	7.00	0.38	21.03	5.17	0.05	0.00	100.33
T690	32	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.27	0.73	17.23	6.71	7.35	0.30	20.16	5.56	0.05	0.01	99.36
T690	45	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.54	0.00	18.16	6.77	7.93	0.57	19.29	5.63	0.02	0.01	98.93
T690	15	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.08	0.03	18.16	6.83	6.97	0.42	19.81	5.86	0.00	0.02	99.18
T690	46	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.80	0.41	17.18	7.04	7.09	0.32	20.63	5.51	0.01	0.00	99.00
T690	14	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.37	0.25	17.71	7.12	6.97	0.40	20.42	5.36	0.01	0.00	99.61
T690	55	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.31	0.07	18.23	7.28	7.17	0.39	19.62	6.26	0.00	0.00	100.34
T690	47	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.46	0.03	18.00	7.33	6.63	0.39	19.79	6.37	0.01	0.00	99.00
T690	17	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.26	0.00	18.06	7.35	7.23	0.44	21.78	3.46	0.02	0.01	99.61
T690	4	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.49	0.04	17.85	7.49	6.86	0.45	19.62	6.18	0.00	0.01	98.98
T690	50	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.89	0.01	17.84	7.50	7.21	0.42	21.39	3.55	0.02	0.01	98.85
T690	58	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.91	0.00	17.64	7.53	7.19	0.50	19.84	5.79	0.00	0.01	99.41
T690	8	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.27	0.00	17.56	7.73	7.09	0.45	19.84	6.20	0.00	0.01	100.14
T690	53	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.90	0.21	17.25	7.81	7.13	0.42	20.00	5.66	0.06	0.00	99.43
T690	59	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.02	0.13	17.26	7.85	7.02	0.35	20.25	5.73	0.02	0.00	99.63
T690	52	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.82	0.13	17.07	8.10	6.85	0.42	19.89	5.85	0.00	0.01	99.14
T690	6	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.40	0.01	17.27	8.17	7.89	0.46	18.33	6.74	0.00	0.01	99.28
T690	11	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.55	0.28	16.96	8.23	6.82	0.36	20.54	5.93	0.02	0.03	99.73
T690	20	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.11	0.33	16.83	8.30	7.10	0.39	19.70	5.88	0.03	0.00	99.66
T690	13	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	39.98	0.32	16.35	8.31	7.28	0.43	19.48	6.00	0.02	0.04	98.20
T690	3	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	41.60	0.03	17.37	8.54	6.66	0.44	20.90	4.85	0.00	0.01	100.41
T690	12	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	39.69	0.07	16.77	8.63	7.07	0.43	19.25	6.83	0.00	0.00	98.75
T690	9	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.44	0.05	17.24	8.77	7.51	0.47	21.61	3.29	0.00	0.01	99.38
T690	2	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.53	0.38	16.24	8.95	7.09	0.34	19.68	6.11	0.02	0.00	99.33
T690	41	94BCW3156	till	0.25-0.5	purple	Cr-pyrope	40.19	0.32	15.87	9.13	6.74	0.38	19.67	6.22	0.01	0.00	98.52
T707	65	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.40	0.37	19.65	4.39	8.65	0.34	20.46	5.58	0.01	0.01	100.85
T707	55	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.43	0.14	19.94	4.69	7.19	0.46	20.90	4.84	0.01	0.00	99.60
T707	56	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	40.79	0.00	19.83	4.93	7.96	0.59	19.73	5.58	0.00	0.00	99.40
T707	57	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.79	0.17	18.69	6.18	7.09	0.31	20.92	5.36	0.00	0.00	100.50
T707	62	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.59	0.02	18.77	6.43	7.07	0.40	20.70	5.73	0.00	0.00	100.70
T707	60	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.06	0.30	18.02	6.57	7.85	0.38	20.45	5.91	0.01	0.00	100.54
T707	66	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.16	0.05	18.56	6.62	8.06	0.46	19.16	6.51	0.00	0.00	100.59
T707	61	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	40.31	0.02	18.15	7.31	7.63	0.44	19.67	6.35	0.00	0.01	99.89
T707	54	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.58	0.12	17.64	7.47	7.09	0.37	20.45	5.79	0.02	0.00	100.52
T707	53	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.02	0.09	18.09	7.53	7.45	0.44	20.07	6.52	0.03	0.00	101.23
T707	59	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	41.02	0.37	17.23	7.62	7.10	0.35	20.34	5.83	0.05	0.00	99.89
T707	63	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	40.40	0.03	17.30	8.51	7.10	0.47	20.02	6.42	0.00	0.01	100.25
T707	58	94BCW3156	till	0.5-0.84	purple	Cr-pyrope	39.90	0.04	16.67	8.99	6.91	0.41	19.58	6.74	0.00	0.00	99.23
T667	3	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	42.36	0.47	19.32	5.44	8.20	0.44	19.62	6.84	0.05	0.01	102.74
T667	4	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	42.62	0.01	19.56	6.18	7.41	0.41	20.64	5.95	0.01	0.01	102.79

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T667	6	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	42.32	0.46	17.98	6.96	7.93	0.38	20.31	5.82	0.05	0.00	102.23
T667	2	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	42.10	0.47	17.31	7.96	7.83	0.33	20.19	6.26	0.03	0.00	102.46
T667	1	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	42.06	0.46	17.22	8.31	7.26	0.42	20.40	6.48	0.07	0.00	102.67
T667	5	94BCW3161	till	0.25-0.5	purple	Cr-pyrope	41.98	0.00	17.97	8.58	7.53	0.52	21.76	3.89	0.00	0.00	102.22
T707	94	94BCW3161	till	0.5-0.84	purple	Cr-pyrope	41.60	0.45	20.09	3.54	7.76	0.35	21.66	4.86	0.01	0.00	100.32
T667	89	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.37	0.33	20.83	2.95	8.20	0.33	21.43	4.93	0.00	0.00	101.38
T667	101	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	43.22	0.46	20.82	3.99	7.10	0.41	21.96	5.06	0.04	0.01	103.07
T667	75	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.58	0.24	20.63	4.11	7.49	0.35	21.53	5.17	0.01	0.00	102.11
T667	100	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.40	0.26	20.58	4.14	7.76	0.42	21.26	4.58	0.04	0.01	101.43
T667	88	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.13	0.37	19.76	4.43	8.27	0.43	20.20	5.75	0.02	0.00	101.34
T667	97	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.26	0.49	19.81	4.43	7.98	0.37	21.22	5.27	0.00	0.01	101.83
T667	113	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.50	0.31	20.21	4.43	7.79	0.33	21.27	5.40	0.03	0.02	102.28
T667	84	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.47	0.01	20.85	4.50	7.61	0.46	21.18	4.92	0.02	0.01	102.01
T667	93	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.41	0.24	20.20	4.50	7.96	0.40	21.31	4.81	0.02	0.00	101.85
T667	71	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.21	0.33	19.62	4.67	8.59	0.45	19.65	6.85	0.01	0.00	102.36
T667	109	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.06	0.02	20.50	4.71	7.58	0.41	20.56	5.49	0.00	0.04	101.37
T667	92	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.58	0.24	20.01	4.73	8.00	0.33	21.20	4.91	0.02	0.00	101.01
T667	76	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.80	0.38	19.75	4.76	8.39	0.50	19.30	6.74	0.00	0.00	101.62
T667	99	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.97	0.35	19.71	4.91	8.88	0.36	19.28	7.20	0.00	0.00	102.66
T667	95	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.02	0.39	19.39	4.98	8.39	0.44	19.13	7.08	0.01	0.02	101.85
T667	79	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.82	0.38	19.53	5.02	8.00	0.42	20.13	6.25	0.01	0.08	101.63
T667	112	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.09	0.20	19.22	5.18	7.51	0.36	21.31	5.42	0.00	0.00	101.30
T667	83	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.25	0.01	20.38	5.20	8.29	0.61	21.51	3.63	0.04	0.00	101.92
T667	106	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.10	0.38	19.14	5.29	8.08	0.46	20.12	6.27	0.00	0.02	101.86
T667	52	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	43.11	0.00	20.47	5.42	7.19	0.42	21.68	5.33	0.00	0.02	103.65
T667	110	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.71	0.26	19.15	5.44	7.54	0.34	20.68	5.64	0.00	0.02	100.80
T667	55	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.20	0.07	19.56	5.58	7.62	0.34	20.78	5.47	0.00	0.02	101.63
T667	53	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.94	0.02	20.10	5.59	7.63	0.41	20.57	5.91	0.01	0.00	103.18
T667	86	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.41	0.26	19.17	5.62	7.32	0.41	20.95	5.11	0.04	0.00	101.30
T667	102	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	43.06	0.34	19.45	5.62	6.92	0.36	21.45	5.61	0.01	0.02	102.83
T667	59	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.12	0.03	19.79	5.77	7.82	0.47	21.59	4.07	0.00	0.02	101.67
T667	69	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.63	0.05	19.19	5.88	9.62	0.59	19.37	5.28	0.04	0.02	101.67
T667	87	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.79	0.59	18.94	5.91	7.33	0.42	20.92	5.44	0.06	0.00	101.40
T667	81	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.40	0.27	19.33	5.92	7.02	0.39	21.65	5.31	0.06	0.00	102.36
T667	74	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.26	0.32	19.12	5.95	7.79	0.43	20.86	5.39	0.03	0.01	102.15
T667	111	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.90	0.27	18.96	5.98	6.96	0.39	21.23	5.45	0.05	0.01	101.20
T667	108	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.70	0.04	19.39	6.06	8.39	0.56	19.28	6.30	0.00	0.00	101.72
T667	114	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.11	0.02	19.08	6.19	7.33	0.41	20.27	5.70	0.00	0.00	101.11
T667	60	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.64	0.01	19.46	6.33	7.45	0.45	20.32	5.89	0.00	0.00	101.54
T667	57	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.57	0.26	18.93	6.35	7.55	0.35	20.83	5.80	0.02	0.00	102.66

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T667	94	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.85	0.40	18.81	6.44	7.13	0.29	21.07	5.73	0.01	0.03	101.75
T667	63	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.78	0.06	19.20	6.45	8.04	0.54	20.60	5.48	0.00	0.01	102.15
T667	68	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.26	0.05	18.69	6.52	8.42	0.51	19.81	5.53	0.00	0.00	100.78
T667	58	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.61	0.01	19.20	6.66	8.31	0.63	19.22	6.50	0.00	0.00	102.14
T667	90	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.96	0.25	18.53	6.71	7.39	0.45	20.88	5.31	0.02	0.00	101.49
T667	85	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.09	0.03	18.78	6.86	7.57	0.44	19.91	6.38	0.00	0.00	102.06
T667	56	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.13	0.41	18.10	6.98	7.60	0.39	20.48	6.01	0.02	0.00	102.12
T667	61	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	40.95	0.36	17.46	7.17	8.22	0.42	19.25	6.71	0.02	0.02	100.58
T667	62	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.09	0.02	18.46	7.25	8.01	0.55	18.96	5.99	0.00	0.00	100.33
T667	91	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	40.90	0.19	17.86	7.25	7.63	0.32	19.82	6.10	0.02	0.00	100.10
T667	67	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.57	0.20	17.86	7.32	6.88	0.35	20.57	5.71	0.02	0.00	100.48
T667	96	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.22	0.11	18.06	7.37	8.49	0.38	19.55	5.77	0.00	0.02	100.96
T667	65	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.09	0.00	18.40	7.72	7.03	0.47	21.93	3.55	0.02	0.01	101.22
T667	80	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.86	0.05	18.05	7.81	7.45	0.52	19.55	6.40	0.03	0.00	101.72
T667	64	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	40.78	0.20	16.77	8.08	11.06	0.60	17.24	6.54	0.03	0.00	101.30
T667	78	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.31	0.05	18.14	8.17	7.03	0.43	21.06	5.36	0.01	0.00	102.56
T667	72	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.58	0.24	17.25	8.30	6.76	0.36	20.58	6.19	0.03	0.00	101.29
T667	70	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.49	0.03	17.63	8.44	6.93	0.44	19.73	6.88	0.00	0.01	101.56
T667	54	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	42.38	0.05	17.78	8.82	7.10	0.54	20.90	5.34	0.00	0.00	102.91
T667	66	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	40.66	0.77	15.92	8.85	7.05	0.46	17.33	9.81	0.00	0.00	100.85
T667	107	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.55	0.21	16.61	8.90	7.12	0.34	19.84	6.68	0.04	0.00	101.29
T667	73	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.61	0.41	16.72	9.14	7.09	0.37	20.27	6.29	0.04	0.00	101.93
T667	103	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	40.60	0.27	15.02	10.25	10.83	0.66	16.48	7.50	0.01	0.01	101.63
T667	77	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.85	0.23	15.66	10.55	6.85	0.44	20.10	6.43	0.05	0.02	102.18
T667	82	94BCW3166	till	0.25-0.5	purple	Cr-pyrope	41.34	0.28	15.52	10.70	6.72	0.40	19.73	6.98	0.04	0.01	101.72
T707	98	94BCW3166	till	0.5-0.84	purple	Cr-pyrope	41.34	0.30	19.87	4.23	7.80	0.38	21.23	5.12	0.00	0.01	100.28
T707	97	94BCW3166	till	0.5-0.84	purple	Cr-pyrope	41.83	0.00	19.82	5.06	7.68	0.60	21.34	4.19	0.04	0.11	100.67
T707	96	94BCW3166	till	0.5-0.84	purple	Cr-pyrope	41.06	0.48	17.29	7.23	7.46	0.35	20.24	5.75	0.03	0.01	99.90
T668	43	94BCW3172	till	0.25-0.5	purple	Cr-pyrope	39.59	0.12	19.70	3.83	14.81	0.50	15.03	5.83	0.01	0.02	99.42
T668	80	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	41.46	0.26	20.82	3.75	7.94	0.37	21.20	5.09	0.01	0.01	100.90
T668	113	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.45	1.19	18.68	3.99	7.54	0.29	20.11	6.75	0.02	0.01	99.03
T668	89	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.94	0.32	19.62	4.18	7.08	0.30	20.70	5.04	0.04	0.01	97.23
T668	117	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.65	0.31	19.36	4.24	8.46	0.43	18.85	6.67	0.01	0.01	97.97
T668	109	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.34	0.28	19.42	4.55	7.63	0.40	20.52	5.20	0.01	0.02	98.37
T668	110	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.90	0.32	19.02	4.57	8.54	0.41	18.38	6.82	0.01	0.00	97.97
T668	115	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.68	0.36	18.99	4.62	8.39	0.45	18.21	7.26	0.02	0.00	97.98
T668	99	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.88	0.36	19.39	4.85	8.39	0.51	18.57	7.14	0.01	0.00	100.09
T668	90	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.74	0.39	19.24	4.90	7.91	0.45	20.51	4.85	0.05	0.00	98.03
T668	69	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.30	0.05	20.08	4.96	8.40	0.50	19.36	5.70	0.00	0.00	99.35
T668	83	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.32	0.47	19.22	4.96	7.97	0.39	19.21	6.70	0.02	0.00	99.25

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T668	116	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.59	0.36	18.75	5.02	8.77	0.44	17.89	7.47	0.02	0.00	98.32
T668	111	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.94	0.43	19.53	5.06	7.54	0.48	20.67	5.11	0.06	0.00	99.81
T668	75	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.92	0.37	19.52	5.10	7.13	0.30	21.52	5.18	0.00	0.02	100.05
T668	95	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.33	0.00	19.34	5.39	7.74	0.38	19.54	5.74	0.02	0.00	98.47
T668	78	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.58	0.34	18.85	5.54	8.41	0.43	18.83	6.56	0.01	0.01	99.56
T668	71	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.69	0.40	18.71	5.57	7.54	0.41	20.28	5.57	0.04	0.01	99.19
T668	96	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.20	0.30	19.01	5.62	6.95	0.32	21.03	5.47	0.01	0.01	98.91
T668	76	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	41.24	0.21	19.34	5.64	7.42	0.45	20.78	5.31	0.01	0.02	100.40
T668	102	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.28	0.36	19.02	5.83	7.42	0.40	20.99	5.11	0.05	0.03	99.47
T668	103	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.83	0.57	18.41	5.83	7.84	0.36	20.33	5.62	0.03	0.00	99.82
T668	101	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	41.04	0.31	19.02	5.85	6.92	0.39	21.21	5.15	0.02	0.00	99.88
T668	85	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.41	0.31	18.90	5.89	7.29	0.33	20.44	5.30	0.03	0.00	98.89
T668	88	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	38.78	0.22	17.34	5.95	11.95	0.61	15.80	7.36	0.01	0.00	98.02
T668	112	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.79	0.05	18.81	6.04	7.44	0.40	19.76	5.77	0.02	0.01	98.07
T668	81	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.47	0.14	18.70	6.07	7.34	0.38	20.54	5.93	0.00	0.02	99.58
T668	82	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.49	0.31	18.40	6.13	7.85	0.38	19.80	5.80	0.00	0.00	99.16
T668	97	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	41.04	0.32	18.50	6.25	7.66	0.37	20.10	5.91	0.00	0.00	100.15
T668	79	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.24	0.06	18.84	6.38	7.13	0.47	20.11	6.04	0.00	0.00	99.27
T668	84	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.20	0.41	18.24	6.39	7.27	0.40	20.17	5.77	0.00	0.01	98.83
T668	73	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	41.08	0.33	18.57	6.49	7.62	0.46	20.41	5.36	0.05	0.00	100.36
T668	70	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.35	0.07	18.21	6.59	7.22	0.48	19.88	5.73	0.00	0.01	97.53
T668	108	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.86	0.27	17.67	6.78	7.48	0.38	19.94	6.07	0.02	0.00	98.47
T668	98	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.74	0.24	18.01	7.02	6.74	0.32	20.66	5.78	0.00	0.02	99.53
T668	91	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.36	0.38	17.43	7.03	7.29	0.39	20.04	5.94	0.05	0.03	97.93
T668	100	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.87	0.45	18.00	7.06	7.17	0.33	20.59	5.80	0.04	0.00	100.31
T668	56	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.22	0.15	17.97	7.28	6.95	0.42	20.23	5.64	0.04	0.02	98.90
T668	63	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.42	0.05	17.96	7.29	8.08	0.53	17.68	6.94	0.01	0.03	97.98
T668	87	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.22	0.23	17.39	7.35	7.10	0.41	19.77	6.08	0.01	0.03	98.59
T668	77	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.50	0.31	17.43	7.47	7.66	0.38	19.72	6.16	0.04	0.02	99.69
T668	57	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.28	0.03	18.26	7.61	6.87	0.33	21.73	4.03	0.01	0.02	99.17
T668	61	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.10	0.02	18.13	7.62	6.92	0.43	19.97	6.11	0.04	0.00	99.32
T668	68	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.61	0.03	17.80	7.81	7.20	0.45	20.81	4.27	0.00	0.00	97.97
T668	105	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.11	0.00	17.79	7.97	7.01	0.41	19.32	6.84	0.04	0.00	99.49
T668	64	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.68	0.25	17.15	7.97	7.34	0.38	20.08	5.95	0.01	0.00	98.81
T668	67	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.52	0.38	16.77	7.99	6.91	0.39	19.88	6.21	0.04	0.01	98.09
T668	65	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.32	0.33	17.29	8.02	7.16	0.43	19.95	5.91	0.02	0.00	99.42
T668	114	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.24	0.05	17.16	8.07	7.96	0.54	18.26	6.58	0.05	0.01	97.90
T668	74	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.43	0.05	17.58	8.32	7.02	0.41	20.00	6.09	0.01	0.01	99.92
T668	66	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.11	0.01	17.38	8.36	7.31	0.49	20.80	4.38	0.00	0.00	98.83
T668	92	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.31	0.38	16.46	8.41	6.95	0.37	19.68	6.30	0.03	0.00	97.89

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T668	59	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.93	0.15	17.17	8.44	6.88	0.46	19.98	6.11	0.01	0.01	99.13
T668	123	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.37	0.40	16.42	8.50	7.11	0.37	19.50	6.42	0.06	0.00	98.15
T668	94	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.05	0.02	17.11	8.65	7.10	0.41	18.82	7.13	0.00	0.01	99.31
T668	122	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.01	0.45	16.57	8.67	6.86	0.41	19.92	6.11	0.04	0.00	99.04
T668	86	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.17	0.58	16.42	8.76	6.53	0.39	20.13	6.23	0.05	0.00	99.25
T668	106	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.00	0.38	16.07	9.02	7.44	0.38	19.40	6.71	0.02	0.01	99.43
T668	58	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.86	0.03	16.72	9.09	7.41	0.49	19.22	6.91	0.04	0.01	99.77
T668	62	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	40.13	0.00	16.60	9.22	7.00	0.41	18.83	7.54	0.01	0.00	99.74
T668	107	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.52	0.04	16.46	9.32	6.77	0.50	19.95	5.63	0.03	0.00	98.21
T668	60	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.62	0.00	15.77	10.04	7.47	0.47	17.55	7.78	0.00	0.01	98.70
T668	72	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.32	0.24	15.18	10.40	9.82	0.66	17.04	7.06	0.02	0.00	99.72
T668	55	94BCW3178	till	0.25-0.5	purple	Cr-pyrope	39.41	0.28	14.18	11.59	7.51	0.43	18.33	7.92	0.04	0.00	99.67
T708	3	94BCW3178	till	0.5-0.84	purple	Cr-pyrope	41.28	0.42	19.12	4.53	8.77	0.42	18.65	7.01	0.00	0.00	100.21
T708	1	94BCW3178	till	0.5-0.84	purple	Cr-pyrope	40.93	0.19	18.45	6.47	7.80	0.45	19.90	5.83	0.00	0.00	100.02
T708	2	94BCW3178	till	0.5-0.84	purple	Cr-pyrope	41.08	0.44	17.16	7.34	7.64	0.36	20.08	5.88	0.03	0.00	100.01
T708	4	94BCW3178	till	0.5-0.84	purple	Cr-pyrope	41.64	0.23	16.99	8.26	7.04	0.35	20.25	5.57	0.05	0.01	100.39
T691	91	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.57	0.27	20.53	2.79	7.88	0.37	21.40	4.64	0.03	0.01	99.48
T691	59	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	42.17	0.44	20.57	2.96	7.48	0.34	22.07	4.63	0.05	0.01	100.72
T691	74	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	42.43	0.41	20.30	3.00	8.08	0.31	21.59	4.66	0.03	0.00	100.80
T691	67	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.76	0.40	20.27	3.24	7.86	0.41	21.27	4.38	0.04	0.01	99.63
T691	116	94BCW3187	till	0.25-0.5	pl purple	Cr-Pyrope	40.84	0.04	19.87	3.51	7.46	0.38	14.17	13.70	0.02	0.00	100.00
T691	20	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.21	0.37	19.77	3.59	7.68	0.34	21.13	4.96	0.04	0.17	99.27
T691	71	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.95	0.41	19.58	3.61	7.66	0.38	21.47	4.87	0.02	0.01	99.97
T691	117	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.77	0.30	19.90	3.85	7.89	0.28	21.14	4.95	0.03	0.01	100.12
T691	40	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.59	0.23	19.51	3.94	7.71	0.43	20.77	4.97	0.01	0.01	99.18
T691	23	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.83	0.12	19.75	4.02	7.35	0.37	21.49	5.02	0.01	0.00	99.94
T691	57	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.92	0.16	20.11	4.07	7.60	0.45	21.37	4.83	0.01	0.00	100.51
T691	103	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.59	0.35	19.51	4.09	8.01	0.43	19.85	6.15	0.01	0.02	100.00
T691	27	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.59	0.53	19.51	4.23	8.17	0.51	20.67	4.78	0.06	0.00	100.05
T691	49	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.49	0.25	19.65	4.29	7.80	0.37	20.80	5.24	0.01	0.01	99.89
T691	55	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	42.04	0.37	19.32	4.36	7.96	0.45	19.32	6.57	0.01	0.00	100.40
T691	43	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.32	0.52	19.39	4.37	7.84	0.42	20.93	4.81	0.04	0.00	99.65
T691	97	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.42	0.37	19.15	4.40	8.45	0.36	20.03	5.82	0.02	0.03	100.04
T691	96	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.95	0.44	18.80	4.43	8.24	0.42	19.79	5.92	0.04	0.00	99.04
T691	86	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.50	0.14	19.66	4.44	7.80	0.37	20.98	5.09	0.03	0.00	100.00
T691	38	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.57	0.05	19.62	4.45	7.01	0.40	21.29	4.49	0.01	0.01	98.89
T691	93	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	42.38	0.23	19.61	4.46	7.09	0.38	21.26	4.99	0.01	0.02	100.42
T691	60	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.26	0.28	19.33	4.48	7.74	0.49	21.38	4.61	0.04	0.01	99.62
T691	47	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.74	0.39	19.44	4.49	8.38	0.41	20.50	4.84	0.05	0.00	100.23
T691	88	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.41	0.06	19.91	4.52	8.69	0.48	18.94	6.03	0.02	0.00	100.06

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	72	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.20	0.37	19.27	4.52	7.75	0.37	21.09	4.82	0.04	0.00	99.44
T691	28	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.14	0.39	18.92	4.62	8.43	0.47	19.48	6.55	0.00	0.01	100.01
T691	68	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.43	0.43	19.28	4.70	7.68	0.48	20.96	4.78	0.05	0.01	99.79
T691	115	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.92	0.27	18.89	4.72	8.71	0.44	18.60	6.96	0.00	0.00	99.51
T691	48	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.50	18.88	4.74	8.10	0.46	19.37	6.55	0.03	0.00	100.11
T691	108	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.86	0.36	18.97	4.74	8.85	0.47	18.54	7.09	0.00	0.00	100.89
T691	30	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.28	0.49	18.79	4.78	7.74	0.37	20.89	5.16	0.04	0.01	99.56
T691	45	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.32	0.37	18.83	4.79	8.80	0.39	18.49	7.01	0.00	0.02	100.02
T691	110	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.27	0.31	18.37	4.81	12.20	0.60	16.65	6.57	0.00	0.01	99.78
T691	65	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.11	0.37	18.65	4.81	8.56	0.46	19.41	6.32	0.00	0.01	99.70
T691	56	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.79	0.28	19.05	4.85	7.01	0.36	21.09	5.23	0.03	0.00	99.66
T691	81	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.24	0.43	18.77	4.87	8.46	0.46	19.44	6.38	0.00	0.01	100.06
T691	82	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.01	0.35	18.84	4.88	8.72	0.43	18.87	6.84	0.02	0.00	99.97
T691	51	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.73	0.34	19.38	4.88	6.79	0.40	21.48	5.23	0.04	0.02	100.28
T691	126	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	42.05	0.39	18.95	4.88	7.60	0.38	20.87	5.34	0.03	0.02	100.51
T691	66	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.40	0.07	19.54	4.89	7.53	0.40	20.95	5.03	0.01	0.01	99.82
T691	79	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.31	0.12	18.93	4.95	8.58	0.41	19.31	6.52	0.05	0.00	100.19
T691	73	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.46	0.53	18.77	4.97	8.18	0.41	19.39	6.31	0.04	0.00	100.07
T691	80	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.19	0.35	18.69	5.02	8.71	0.41	18.70	6.97	0.02	0.00	100.05
T691	32	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.81	0.37	18.75	5.03	8.76	0.45	19.04	6.57	0.02	0.02	99.83
T691	25	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.86	0.13	19.01	5.10	7.41	0.40	20.87	5.43	0.00	0.00	100.21
T691	64	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.30	0.17	19.21	5.12	7.35	0.46	21.03	4.99	0.04	0.00	99.67
T691	104	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.77	0.02	19.43	5.16	8.06	0.47	20.08	5.55	0.01	0.00	100.56
T691	119	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.42	0.34	18.58	5.18	8.36	0.36	19.37	5.67	0.00	0.00	99.29
T691	35	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.26	0.66	18.32	5.21	8.37	0.47	19.43	6.27	0.04	0.00	100.03
T691	22	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.91	0.41	18.39	5.22	8.68	0.46	18.81	6.86	0.00	0.01	99.74
T691	94	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.50	0.27	19.06	5.26	7.33	0.40	20.92	5.22	0.01	0.00	99.97
T691	90	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.44	0.35	18.65	5.32	8.28	0.41	19.75	6.17	0.00	0.01	100.37
T691	113	94BCW3187	till	0.25-0.5	red	Cr-Pyrope	41.30	0.35	18.34	5.48	8.43	0.39	19.63	6.04	0.00	0.00	99.97
T691	18	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.02	0.22	18.65	5.49	7.59	0.36	20.86	5.36	0.03	0.00	99.57
T691	29	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.16	0.67	17.69	5.55	8.23	0.33	20.53	5.38	0.05	0.01	99.58
T691	122	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.19	0.00	19.09	5.62	8.36	0.48	19.62	5.96	0.00	0.01	100.32
T691	33	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.98	0.23	18.72	5.68	7.66	0.40	20.64	5.34	0.01	0.00	99.66
T691	58	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.10	0.11	19.02	5.72	7.92	0.50	20.14	5.25	0.02	0.01	99.79
T691	50	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.24	0.47	18.21	5.74	8.47	0.44	18.98	6.85	0.00	0.01	100.42
T691	92	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.43	0.18	18.81	5.76	7.31	0.40	20.87	5.13	0.02	0.01	99.90
T691	17	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.06	0.11	18.23	5.77	7.46	0.38	20.58	5.61	0.00	0.00	99.20
T691	53	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.58	0.09	18.64	5.98	7.34	0.48	19.98	5.76	0.03	0.00	99.88
T691	44	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.31	18.23	6.00	7.58	0.36	20.47	5.60	0.01	0.00	100.17
T691	42	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.29	0.32	18.05	6.19	7.42	0.36	20.56	5.55	0.01	0.00	99.74

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	37	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.92	0.41	17.74	6.37	7.57	0.41	20.04	5.56	0.05	0.00	99.06
T691	109	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.45	0.35	18.04	6.46	7.64	0.42	19.93	5.66	0.02	0.02	99.99
T691	70	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.68	0.14	17.90	6.50	7.63	0.32	20.17	5.79	0.02	0.00	100.14
T691	106	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.64	0.40	17.69	6.51	8.39	0.34	18.72	6.92	0.03	0.00	100.63
T691	54	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.24	0.47	17.85	6.55	7.37	0.38	20.80	5.63	0.03	0.00	100.32
T691	121	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.00	18.34	6.59	7.95	0.52	19.55	5.75	0.01	0.00	100.18
T691	69	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.70	0.01	18.67	6.61	7.31	0.56	22.50	2.63	0.02	0.01	100.01
T691	107	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.56	0.27	18.23	6.61	7.66	0.41	20.65	5.44	0.03	0.00	100.87
T691	111	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.31	0.31	17.05	6.63	8.54	0.31	19.48	5.94	0.02	0.01	99.60
T691	16	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.93	0.55	17.67	6.68	7.36	0.39	20.52	5.59	0.06	0.01	99.75
T691	36	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.20	0.31	17.54	6.68	7.23	0.39	20.32	5.79	0.03	0.02	99.52
T691	63	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.94	0.45	17.35	6.69	7.82	0.41	19.74	5.90	0.00	0.00	99.30
T691	124	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.87	0.31	17.81	6.71	6.58	0.41	21.19	5.67	0.03	0.00	100.59
T691	31	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.10	0.24	17.64	6.77	7.61	0.40	20.21	5.12	0.03	0.01	99.12
T691	46	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.91	0.10	17.95	6.87	7.45	0.48	20.05	5.71	0.00	0.01	99.51
T691	114	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.15	0.18	17.73	6.89	7.62	0.36	20.36	5.17	0.03	0.01	99.49
T691	118	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.03	0.51	17.42	6.93	7.57	0.38	19.50	6.49	0.01	0.01	99.84
T691	76	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.13	0.46	17.47	6.98	7.46	0.43	20.41	5.74	0.02	0.00	100.11
T691	123	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.52	0.09	18.09	7.00	7.83	0.46	19.63	6.13	0.00	0.02	100.77
T691	24	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.91	0.07	17.92	7.10	6.97	0.36	19.97	6.25	0.00	0.01	99.58
T691	99	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.20	0.33	17.56	7.11	7.37	0.41	20.34	5.58	0.04	0.01	99.95
T691	62	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.33	0.27	17.33	7.18	7.25	0.37	20.17	5.81	0.02	0.01	99.72
T691	75	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.75	0.50	16.95	7.20	8.24	0.40	18.58	7.29	0.04	0.00	99.94
T691	61	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.08	0.40	17.40	7.35	7.45	0.41	20.07	5.70	0.05	0.01	99.92
T691	102	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.08	0.39	17.02	7.52	7.47	0.41	20.01	6.03	0.01	0.00	99.95
T691	39	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.78	0.34	16.99	7.59	7.17	0.34	20.37	5.81	0.03	0.01	99.43
T691	41	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.71	0.45	16.81	7.61	7.59	0.40	19.17	6.53	0.02	0.01	100.30
T691	52	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.94	0.63	16.40	7.64	8.05	0.31	19.76	5.95	0.07	0.01	99.75
T691	85	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.22	0.19	17.11	7.69	7.16	0.44	20.08	5.57	0.03	0.03	99.50
T691	101	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.29	0.04	17.68	7.75	7.90	0.58	20.07	5.01	0.01	0.00	100.32
T691	34	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.07	0.37	16.91	7.78	7.12	0.34	20.14	5.91	0.03	0.00	99.66
T691	21	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.74	0.08	17.22	7.84	7.27	0.44	19.95	6.16	0.02	0.00	99.72
T691	120	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.23	0.41	16.56	8.03	7.13	0.40	20.27	5.72	0.03	0.00	99.78
T691	84	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.81	0.21	17.08	8.08	7.28	0.37	19.63	6.25	0.00	0.01	99.72
T691	78	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.96	0.05	17.16	8.12	7.88	0.50	18.62	6.72	0.00	0.01	100.03
T691	83	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.38	16.83	8.18	7.24	0.35	20.45	5.80	0.02	0.01	100.52
T691	105	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.18	0.02	17.03	8.23	7.15	0.47	20.09	5.81	0.03	0.00	100.02
T691	127	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.19	0.04	17.03	8.32	7.62	0.59	19.13	6.45	0.00	0.01	100.38
T691	26	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.16	16.52	8.63	7.48	0.47	19.25	6.30	0.04	0.01	100.33
T691	89	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.77	0.09	16.81	8.79	7.40	0.50	19.03	6.45	0.02	0.00	99.87

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	19	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.54	0.27	16.35	8.84	7.14	0.43	20.35	5.77	0.02	0.02	99.73
T691	77	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.54	0.09	16.44	8.93	7.71	0.55	18.75	6.60	0.01	0.01	99.63
T691	87	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	41.10	0.03	16.68	8.99	7.19	0.43	18.95	6.82	0.00	0.00	100.17
T691	98	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.98	0.43	15.83	9.38	7.48	0.34	19.60	6.28	0.06	0.01	100.40
T691	112	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.40	0.62	14.92	10.18	7.17	0.39	19.08	6.74	0.08	0.00	99.59
T691	95	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.35	0.65	14.88	10.63	6.76	0.43	19.36	6.84	0.03	0.01	99.95
T691	125	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.01	0.34	14.54	10.67	7.28	0.51	18.81	7.05	0.03	0.00	99.26
T691	100	94BCW3187	till	0.25-0.5	purple	Cr-Pyrope	40.42	0.41	14.51	11.06	6.71	0.38	19.76	6.36	0.03	0.01	99.64
T708	20	94BCW3187	till	0.5-0.84	purple	Cr-pyrope	41.48	0.28	21.07	2.74	8.48	0.46	21.12	4.16	0.01	0.00	99.80
T708	17	94BCW3187	till	0.5-0.84	purple	Cr-pyrope	42.24	0.12	18.94	5.76	7.79	0.40	20.83	4.99	0.02	0.01	101.10
T708	19	94BCW3187	till	0.5-0.84	purple	Cr-pyrope	41.32	0.25	18.16	6.12	7.49	0.35	20.44	5.51	0.02	0.01	99.67
T708	18	94BCW3187	till	0.5-0.84	purple	Cr-pyrope	40.65	0.36	17.81	6.64	8.06	0.42	19.57	5.80	0.01	0.00	99.31
T669	85	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.43	0.36	21.49	2.02	8.16	0.32	20.80	4.30	0.04	0.02	98.94
T669	104	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	42.57	0.24	21.89	2.58	8.05	0.48	21.47	4.35	0.03	0.01	101.65
T669	155	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.98	0.34	20.99	2.82	7.59	0.39	21.13	4.91	0.04	0.01	100.20
T669	81	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	42.45	0.26	21.66	3.06	7.66	0.35	21.50	4.47	0.04	0.01	101.45
T669	77	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.89	0.20	21.21	3.35	7.96	0.40	21.18	4.58	0.02	0.01	100.80
T669	75	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	42.30	0.30	20.53	3.64	7.73	0.35	20.99	5.04	0.03	0.00	100.89
T669	79	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.77	0.35	20.33	3.71	7.41	0.39	21.19	4.98	0.03	0.01	100.18
T669	89	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.46	0.47	19.96	3.88	7.67	0.45	20.62	5.35	0.03	0.01	99.90
T669	119	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.15	0.02	20.91	4.06	7.47	0.43	20.57	4.82	0.01	0.00	99.45
T669	80	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.88	0.21	20.55	4.06	7.92	0.40	20.85	4.58	0.06	0.02	100.52
T669	138	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.40	0.41	20.10	4.22	7.42	0.38	21.19	5.03	0.03	0.00	100.16
T669	70	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.89	0.31	20.26	4.30	7.29	0.37	20.76	5.00	0.02	0.00	100.20
T669	113	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.06	0.42	19.71	4.38	8.10	0.36	19.47	6.28	0.05	0.06	99.88
T669	87	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.51	0.16	19.86	4.56	7.26	0.32	20.30	5.27	0.03	0.00	99.27
T669	62	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.50	0.11	20.19	4.56	7.35	0.39	20.49	5.29	0.02	0.01	99.91
T669	78	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.52	0.21	19.96	4.57	7.81	0.33	20.55	5.21	0.00	0.01	100.15
T669	98	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.32	0.36	19.58	4.58	8.52	0.47	18.70	6.99	0.00	0.01	100.53
T669	132	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.82	0.24	20.10	4.59	6.94	0.33	20.97	5.08	0.04	0.02	100.13
T669	156	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.50	0.45	19.63	4.63	7.94	0.52	19.48	6.29	0.03	0.02	100.49
T669	66	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.44	0.17	19.88	4.68	7.41	0.39	20.60	5.52	0.02	0.00	100.11
T669	105	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.70	0.32	19.92	4.68	6.82	0.35	20.93	5.24	0.02	0.00	99.98
T669	137	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.28	0.45	18.99	4.68	8.03	0.41	18.70	6.30	0.03	0.01	97.89
T669	112	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.68	0.29	19.21	4.70	8.04	0.38	18.63	6.75	0.02	0.02	98.71
T669	96	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.91	0.36	19.31	4.82	8.31	0.40	18.58	6.90	0.00	0.01	99.59
T669	130	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.99	0.34	19.27	4.84	8.02	0.39	19.07	6.70	0.00	0.01	99.62
T669	107	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.25	0.35	19.52	4.85	8.52	0.39	18.43	7.09	0.00	0.02	100.41
T669	93	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.75	0.40	19.19	4.86	7.81	0.47	19.21	6.21	0.03	0.02	98.95
T669	122	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.69	0.36	18.95	4.91	8.52	0.39	18.36	7.14	0.01	0.00	99.35

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T669	91	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.50	0.39	19.37	4.92	8.35	0.40	18.22	7.11	0.03	0.01	99.29
T669	124	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.39	0.35	19.49	4.92	8.31	0.39	19.10	6.36	0.01	0.00	100.32
T669	126	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.07	0.57	18.97	4.97	8.35	0.46	18.46	6.86	0.03	0.01	99.74
T669	141	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.73	0.35	19.21	4.98	8.52	0.50	19.45	5.55	0.02	0.00	99.30
T669	100	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.07	0.38	19.04	5.00	8.56	0.37	18.53	7.12	0.00	0.04	100.10
T669	127	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.72	0.25	19.68	5.04	7.38	0.34	20.68	5.10	0.06	0.00	100.24
T669	97	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.11	0.51	19.35	5.04	7.71	0.44	18.86	7.16	0.02	0.00	100.20
T669	146	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.21	0.04	19.39	5.19	8.95	0.68	17.99	6.38	0.00	0.01	98.84
T669	159	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.34	0.50	19.24	5.31	7.17	0.35	20.56	5.52	0.05	0.02	100.05
T669	114	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.43	0.00	19.40	5.35	7.68	0.56	19.37	5.98	0.02	0.02	98.81
T669	140	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.22	0.33	18.98	5.41	7.08	0.34	20.65	5.20	0.02	0.02	99.26
T669	131	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.40	0.31	18.95	5.45	7.97	0.44	18.88	6.50	0.02	0.03	99.94
T669	90	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.95	0.46	18.81	5.61	7.82	0.43	19.20	6.40	0.06	0.00	99.73
T669	111	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.81	0.14	19.66	5.62	7.70	0.46	20.50	5.39	0.02	0.01	101.31
T669	101	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.37	0.29	18.92	5.66	7.92	0.39	19.63	6.40	0.04	0.02	100.65
T669	129	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.60	0.11	18.77	5.84	7.30	0.34	20.19	5.61	0.01	0.01	99.77
T669	92	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.88	0.05	19.38	5.98	6.49	0.46	21.00	4.52	0.04	0.01	98.80
T669	134	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.83	0.35	18.73	5.98	6.96	0.37	20.31	5.59	0.04	0.01	100.16
T669	73	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.21	0.07	19.32	6.04	7.21	0.36	19.95	5.76	0.00	0.01	99.92
T669	144	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.88	0.31	18.51	6.21	7.18	0.36	20.26	5.44	0.06	0.01	99.22
T669	150	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.04	0.40	18.34	6.27	7.64	0.46	19.19	6.35	0.00	0.00	99.69
T669	103	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.58	0.62	18.50	6.42	7.03	0.36	20.46	5.51	0.05	0.00	100.53
T669	133	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.35	0.24	18.60	6.48	7.51	0.47	20.04	5.45	0.04	0.00	100.17
T669	88	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.29	0.64	17.96	6.50	7.43	0.47	19.93	5.43	0.07	0.00	98.70
T669	118	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.49	0.30	18.09	6.51	6.72	0.36	20.49	5.45	0.02	0.00	98.44
T669	67	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.45	0.09	18.59	6.55	7.06	0.39	20.41	5.62	0.00	0.01	100.17
T669	136	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.96	0.36	18.13	6.66	6.99	0.42	20.07	5.73	0.04	0.01	99.36
T669	135	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.44	0.02	18.79	6.69	7.32	0.57	20.01	5.21	0.02	0.00	100.06
T669	145	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.50	0.02	18.66	6.78	8.05	0.51	20.77	3.51	0.00	0.01	98.79
T669	108	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.19	0.01	18.75	6.82	7.27	0.51	21.19	4.06	0.00	0.01	99.80
T669	83	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.16	0.01	18.39	6.98	7.49	0.34	19.45	6.41	0.00	0.00	100.21
T669	152	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.70	0.42	17.67	7.01	7.02	0.32	19.94	5.71	0.04	0.00	98.83
T669	68	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.56	0.06	18.21	7.19	6.95	0.47	19.98	5.92	0.00	0.00	99.33
T669	157	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.47	0.02	17.99	7.21	7.30	0.41	19.31	6.19	0.02	0.00	98.91
T669	147	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.66	0.08	17.90	7.23	9.18	0.48	18.54	5.06	0.00	0.00	99.12
T669	117	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.76	0.29	17.71	7.43	7.04	0.33	20.01	6.11	0.01	0.00	99.67
T669	116	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.21	0.44	17.27	7.46	6.98	0.32	19.49	5.99	0.03	0.01	98.21
T669	74	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.89	0.07	17.46	7.48	7.26	0.43	19.24	5.87	0.02	0.00	97.72
T669	123	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.95	0.03	18.18	7.51	6.62	0.36	19.56	6.39	0.01	0.01	99.62
T669	149	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.73	0.23	17.60	7.60	7.11	0.35	19.94	5.96	0.03	0.00	99.55

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T669	110	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.31	0.05	17.76	7.74	7.08	0.50	19.41	5.78	0.02	0.01	98.66
T669	76	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.10	0.02	18.11	7.74	7.33	0.54	19.85	5.35	0.02	0.01	100.06
T669	95	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.57	0.05	17.62	7.78	7.15	0.46	19.24	6.18	0.00	0.01	99.06
T669	154	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.70	0.46	17.20	7.83	6.79	0.30	20.23	5.76	0.02	0.01	99.28
T669	153	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.73	0.04	17.70	7.85	7.44	0.44	19.44	5.96	0.02	0.00	99.61
T669	71	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.93	0.02	18.01	7.90	7.07	0.50	20.60	4.60	0.00	0.01	99.63
T669	94	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.38	0.03	18.25	7.91	7.28	0.47	21.67	3.11	0.00	0.00	100.09
T669	148	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.71	0.00	17.55	7.94	6.90	0.41	20.54	5.03	0.00	0.00	99.09
T669	109	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.00	0.06	17.61	8.08	7.03	0.47	19.71	5.96	0.02	0.01	99.95
T669	151	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.32	0.01	17.38	8.13	7.57	0.45	18.55	6.60	0.00	0.00	99.00
T669	139	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.31	0.28	16.08	8.16	7.28	0.43	18.77	6.37	0.00	0.01	96.71
T669	143	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.30	0.07	17.28	8.31	7.35	0.49	19.31	5.81	0.01	0.03	98.95
T669	84	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.82	0.01	17.48	8.34	7.24	0.51	20.35	4.68	0.01	0.00	99.43
T669	63	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.43	0.20	16.81	8.52	6.95	0.39	19.71	6.12	0.00	0.02	99.14
T669	128	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.63	0.00	17.16	8.75	6.95	0.44	19.69	6.32	0.02	0.00	99.96
T669	64	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.09	0.09	16.31	9.40	7.57	0.40	19.00	5.86	0.03	0.02	98.76
T669	106	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.55	0.06	16.24	9.43	6.73	0.40	19.48	6.16	0.04	0.37	99.45
T669	69	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.10	0.27	15.70	9.44	7.17	0.39	18.90	6.83	0.03	0.00	98.83
T669	72	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.03	0.74	14.87	9.58	7.32	0.39	19.05	6.91	0.01	0.00	98.89
T669	115	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.94	0.81	15.10	9.60	7.58	0.42	17.97	7.51	0.05	0.01	98.99
T669	82	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.16	0.14	15.46	9.71	7.02	0.41	18.63	7.35	0.02	0.03	98.93
T669	120	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.99	0.02	16.65	9.81	6.46	0.41	20.79	4.43	0.00	0.00	99.56
T669	102	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	41.03	0.01	16.31	9.89	6.88	0.39	18.82	7.03	0.00	0.00	100.36
T669	125	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.23	0.58	15.23	10.04	7.44	0.47	18.83	6.60	0.04	0.01	99.47
T669	65	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.15	0.24	14.74	10.14	9.47	0.49	15.87	7.94	0.03	0.02	98.09
T669	61	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	40.21	0.03	15.70	10.57	7.46	0.59	17.51	7.67	0.01	0.02	99.76
T669	121	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.76	0.22	14.76	10.80	7.19	0.46	18.54	6.80	0.04	0.00	98.56
T669	142	94BCW3192	till	0.25-0.5	purple	Cr-pyrope	39.81	0.41	13.88	11.94	6.88	0.43	18.27	7.48	0.03	0.00	99.12
T708	58	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	42.13	0.22	21.04	2.45	7.31	0.39	21.85	4.56	0.00	0.01	99.96
T708	53	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	41.81	0.02	20.50	4.02	6.34	0.33	22.63	4.44	0.02	0.01	100.11
T708	63	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	41.02	0.34	18.72	4.96	8.57	0.44	18.46	6.96	0.00	0.00	99.47
T708	59	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.35	0.39	18.79	4.98	8.46	0.40	19.23	6.37	0.00	0.00	98.96
T708	62	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.76	0.27	18.77	5.11	8.49	0.44	18.90	6.91	0.03	0.01	99.67
T708	55	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	41.29	0.08	18.43	6.06	7.25	0.36	20.19	5.50	0.02	0.01	99.20
T708	61	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	41.57	0.09	18.78	6.25	7.85	0.59	20.03	4.76	0.00	0.00	99.91
T708	56	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.80	0.09	18.43	6.47	7.39	0.40	19.73	5.88	0.00	0.00	99.19
T708	52	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	41.68	0.05	18.39	6.51	7.58	0.50	19.29	6.07	0.02	0.00	100.07
T708	50	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.81	0.12	18.14	6.90	6.93	0.35	20.39	5.52	0.00	0.01	99.15
T708	54	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.86	0.38	17.40	7.30	7.31	0.39	19.84	5.51	0.05	0.01	99.05
T708	51	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.69	0.22	17.47	7.34	7.04	0.38	20.03	5.80	0.02	0.01	98.98

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	60	94BCW3192	till	0.5-0.84	purple	Cr-pyrope	40.28	0.31	17.16	7.80	7.05	0.44	20.52	5.60	0.00	0.01	99.16
T708	127	94BCW3193	till	0.5-0.84	redish	Cr-pyrope	41.88	0.29	21.25	2.07	7.94	0.39	21.08	4.76	0.01	0.01	99.67
T708	95	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	42.04	0.38	21.01	2.32	7.81	0.36	21.48	4.61	0.00	0.01	100.00
T708	125	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	42.04	0.38	20.71	2.70	7.57	0.40	21.74	4.61	0.01	0.00	100.14
T708	114	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.88	0.05	21.04	3.22	7.62	0.39	20.92	4.19	0.04	0.17	98.50
T708	124	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.17	0.42	19.87	3.88	7.37	0.40	21.29	4.68	0.01	0.02	99.11
T708	100	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.50	0.21	20.05	3.90	7.90	0.35	20.78	4.57	0.01	0.00	99.26
T708	105	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.75	0.17	20.24	3.94	7.26	0.39	21.27	4.78	0.01	0.00	98.81
T708	107	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	42.54	0.24	20.03	4.20	7.86	0.37	21.05	4.90	0.00	0.02	101.20
T708	119	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.50	0.34	19.12	4.32	8.66	0.45	18.05	6.99	0.01	0.01	98.45
T708	96	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.10	0.27	19.64	4.37	7.60	0.42	20.85	4.90	0.03	0.00	99.18
T708	93	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.75	0.33	19.01	4.55	8.56	0.39	18.82	6.66	0.00	0.00	99.07
T708	108	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.80	0.26	19.41	4.60	7.93	0.41	20.34	5.03	0.03	0.01	99.82
T708	123	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.19	0.57	18.54	4.80	8.33	0.30	20.20	5.28	0.04	0.00	99.26
T708	120	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.57	0.38	18.60	4.97	8.00	0.42	19.20	6.38	0.02	0.00	98.54
T708	88	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.54	0.39	18.93	5.03	8.19	0.40	19.12	6.35	0.02	0.01	99.98
T708	110	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.49	0.39	18.67	5.03	8.24	0.44	19.12	6.26	0.01	0.00	99.64
T708	111	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.91	0.00	19.46	5.03	7.25	0.43	20.71	5.01	0.01	0.01	99.81
T708	121	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.06	0.25	18.20	5.05	7.76	0.34	20.21	5.47	0.02	0.01	97.37
T708	89	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.24	0.49	18.67	5.28	8.16	0.48	18.95	6.65	0.05	0.00	99.98
T708	84	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.78	0.00	19.30	5.61	8.03	0.50	19.95	5.15	0.00	0.01	100.34
T708	116	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.91	0.37	18.19	5.97	7.49	0.32	20.58	5.33	0.05	0.00	99.20
T708	102	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.04	0.24	18.46	6.06	7.02	0.37	20.92	5.25	0.00	0.00	99.35
T708	103	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.45	0.22	18.56	6.07	6.64	0.35	21.66	5.26	0.02	0.00	99.23
T708	106	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.10	0.48	17.70	6.23	7.51	0.38	20.28	5.51	0.00	0.01	98.20
T708	109	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.06	0.22	17.66	6.42	10.82	0.53	17.61	6.34	0.01	0.02	99.67
T708	98	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.51	0.21	17.95	6.53	7.04	0.38	20.22	5.52	0.05	0.00	99.39
T708	122	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	39.98	0.05	18.18	6.57	7.53	0.41	19.33	5.94	0.03	0.00	98.01
T708	91	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.93	0.28	17.70	6.75	7.18	0.34	20.36	5.96	0.00	0.00	99.51
T708	113	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.83	0.04	18.65	6.76	7.06	0.45	22.91	2.27	0.00	0.01	98.99
T708	104	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.06	0.13	17.72	7.09	6.98	0.37	20.28	5.55	0.02	0.01	99.21
T708	99	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.54	0.32	17.41	7.15	6.94	0.41	20.17	5.63	0.01	0.01	98.59
T708	85	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.28	0.04	18.03	7.28	8.21	0.47	18.64	6.84	0.00	0.01	100.82
T708	86	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.94	0.23	17.69	7.29	7.11	0.39	20.42	5.62	0.02	0.00	99.70
T708	87	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.94	0.16	17.45	7.66	6.87	0.44	20.39	5.50	0.00	0.01	99.41
T708	112	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	41.24	0.36	17.17	7.74	7.30	0.47	19.73	5.66	0.01	0.01	99.70
T708	97	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.02	0.14	16.79	8.00	6.95	0.40	19.76	5.86	0.00	0.00	97.93
T708	94	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.85	0.49	16.69	8.07	7.00	0.36	20.25	5.92	0.00	0.01	99.65
T708	101	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.79	0.47	16.41	8.12	7.87	0.43	18.24	6.50	0.00	0.01	98.82
T708	92	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.56	0.38	16.32	8.53	7.01	0.36	19.77	6.11	0.02	0.01	99.07

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	115	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.87	0.15	15.96	9.11	7.31	0.39	19.28	6.37	0.00	0.01	99.43
T708	118	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.48	0.03	16.37	9.34	6.79	0.43	19.47	6.13	0.03	0.00	99.06
T708	90	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.28	0.02	16.10	9.43	7.11	0.39	18.83	7.30	0.01	0.01	99.48
T708	117	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.22	0.08	15.97	9.54	6.79	0.43	19.83	6.14	0.00	0.00	99.01
T708	126	94BCW3193	till	0.5-0.84	purple	Cr-pyrope	40.30	0.00	16.03	9.62	7.73	0.54	17.36	7.70	0.00	0.01	99.30
T708	128	94BCW3193	till	0.5-0.84	ong-rd	pyrope	42.56	0.67	21.19	1.43	8.37	0.35	21.60	4.30	0.06	0.01	100.52
T670	154	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	42.10	0.25	21.58	2.76	7.41	0.30	21.39	4.70	0.02	0.01	100.51
T670	153	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.80	0.26	21.27	2.88	9.63	0.42	19.77	4.51	0.04	0.02	100.60
T670	150	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	42.00	0.19	21.10	3.09	7.65	0.33	21.09	4.71	0.03	0.00	100.19
T670	155	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.61	0.36	20.60	3.71	7.56	0.32	20.98	5.11	0.03	0.02	100.29
T670	147	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.16	0.46	20.29	3.73	8.31	0.40	20.54	4.75	0.05	0.00	99.69
T670	119	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.69	0.22	20.77	3.78	8.04	0.46	20.93	4.55	0.04	0.02	100.49
T670	137	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.07	0.51	19.49	4.03	8.18	0.32	20.65	5.05	0.03	0.02	99.35
T670	148	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.52	0.43	20.09	4.22	7.60	0.37	20.85	5.02	0.04	0.00	100.13
T670	149	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.15	0.36	19.70	4.26	7.67	0.36	20.45	5.13	0.00	0.01	99.08
T670	132	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.35	0.59	19.35	4.41	7.47	0.33	21.02	5.20	0.03	0.00	99.74
T670	139	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.34	0.33	19.91	4.45	7.55	0.35	20.65	5.05	0.03	0.00	99.67
T670	117	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.31	0.37	19.39	4.57	8.35	0.40	18.97	6.67	0.02	0.00	100.06
T670	145	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.75	0.32	19.29	4.60	7.76	0.37	20.23	5.79	0.04	0.02	99.17
T670	130	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.40	0.20	19.00	4.60	11.59	0.61	16.94	6.52	0.00	0.01	99.84
T670	109	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.82	0.10	19.81	4.64	7.05	0.32	21.23	5.32	0.02	0.00	100.29
T670	143	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.98	0.43	19.38	4.81	8.36	0.41	18.54	6.91	0.03	0.03	99.87
T670	122	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.23	0.34	19.46	4.90	8.24	0.47	18.47	7.05	0.00	0.01	100.17
T670	136	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	19.66	4.93	7.10	0.35	21.34	5.19	0.00	0.01	100.46
T670	116	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.33	0.08	19.28	5.15	7.30	0.33	20.61	5.67	0.02	0.01	99.78
T670	126	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.66	0.30	19.11	5.18	7.35	0.33	20.89	5.40	0.01	0.00	100.23
T670	140	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.35	0.34	18.77	5.37	7.36	0.35	20.53	5.21	0.04	0.01	98.34
T670	121	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.25	0.25	18.95	5.47	7.79	0.42	19.75	6.22	0.00	0.01	100.10
T670	152	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.20	0.39	18.93	5.49	8.23	0.40	18.98	6.74	0.01	0.02	100.38
T670	134	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.19	0.30	19.02	5.55	7.39	0.38	20.43	5.00	0.00	0.03	99.28
T670	151	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.39	0.03	19.87	5.60	7.74	0.53	19.64	5.45	0.00	0.00	100.25
T670	146	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.49	0.25	19.26	5.61	7.81	0.42	20.14	5.19	0.06	0.00	100.22
T670	135	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.00	0.40	19.07	5.61	6.50	0.32	21.87	5.12	0.06	0.01	99.96
T670	127	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.65	0.02	20.01	5.64	7.63	0.46	21.71	3.06	0.00	0.03	100.19
T670	101	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.59	0.02	19.99	5.69	7.59	0.43	20.91	4.74	0.00	0.00	100.95
T670	125	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.51	0.32	19.46	5.69	7.17	0.36	20.70	5.29	0.05	0.01	100.55
T670	131	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.90	0.40	18.76	5.73	7.84	0.35	19.41	6.43	0.00	0.00	99.79
T670	94	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.10	0.14	19.34	5.74	7.68	0.55	19.04	6.45	0.01	0.01	100.05
T670	124	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.50	0.24	19.19	6.09	7.07	0.34	20.46	5.31	0.03	0.03	100.25
T670	129	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.21	0.43	18.29	6.18	7.73	0.39	19.98	6.04	0.03	0.02	100.29

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	120	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.18	0.63	18.06	6.26	7.39	0.40	19.85	5.61	0.04	0.00	99.43
T670	110	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.98	0.39	18.43	6.37	7.00	0.38	20.80	5.22	0.05	0.00	99.62
T670	92	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.65	0.00	19.37	6.45	7.01	0.44	21.80	3.85	0.01	0.01	100.60
T670	138	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.74	0.59	17.72	6.55	7.99	0.31	19.34	5.98	0.00	0.00	100.22
T670	123	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.20	0.22	18.61	6.56	7.40	0.38	20.41	5.55	0.03	0.00	100.36
T670	118	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.21	0.30	18.17	6.69	7.65	0.41	19.23	6.42	0.03	0.03	100.13
T670	93	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.77	0.01	19.05	6.69	7.23	0.47	22.33	2.76	0.00	0.00	100.30
T670	106	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.03	0.21	18.37	6.81	7.12	0.43	20.42	5.45	0.01	0.00	99.85
T670	141	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.84	0.37	17.40	7.07	7.33	0.37	19.72	6.02	0.02	0.01	99.14
T670	133	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.18	0.43	17.59	7.19	7.06	0.41	20.07	6.13	0.02	0.00	100.09
T670	105	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.35	0.19	18.22	7.23	6.89	0.41	20.77	5.43	0.04	0.01	100.53
T670	112	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.72	0.29	17.89	7.28	6.93	0.43	20.36	5.78	0.02	0.00	99.70
T670	90	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.74	0.09	18.24	7.38	8.11	0.53	19.04	6.39	0.00	0.01	100.53
T670	89	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.08	0.02	18.23	7.42	6.84	0.38	20.66	4.94	0.00	0.02	99.56
T670	113	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.73	0.05	18.21	7.47	7.84	0.53	18.23	7.02	0.00	0.01	100.08
T670	128	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.55	0.36	17.74	7.50	7.01	0.38	20.09	6.15	0.00	0.00	100.79
T670	111	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.94	0.46	17.57	7.51	6.48	0.37	20.21	6.02	0.06	0.00	99.63
T670	86	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.12	0.02	18.36	7.63	7.02	0.34	18.73	7.46	0.00	0.02	100.70
T670	97	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.17	0.02	18.38	7.64	7.39	0.50	19.07	6.57	0.00	0.00	100.74
T670	98	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.31	0.05	18.14	7.75	7.20	0.50	20.50	4.95	0.00	0.01	100.40
T670	104	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.87	0.06	17.70	7.80	7.51	0.51	19.05	6.08	0.00	0.01	99.59
T670	100	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.57	0.07	18.06	7.83	6.96	0.43	19.96	5.98	0.00	0.02	100.87
T670	108	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.98	0.28	17.28	7.89	7.63	0.38	19.32	6.44	0.00	0.02	100.20
T670	107	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.22	0.16	18.06	7.89	7.03	0.38	20.21	5.75	0.02	0.01	100.73
T670	88	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.11	0.18	17.53	7.93	7.26	0.39	19.74	5.95	0.03	0.01	100.12
T670	144	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.26	0.42	16.74	8.32	6.88	0.35	19.81	6.33	0.04	0.01	99.16
T670	99	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.33	0.00	17.47	8.51	6.72	0.43	21.87	3.85	0.02	0.00	100.20
T670	102	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.77	0.01	17.07	8.56	7.44	0.40	19.00	6.54	0.00	0.00	99.79
T670	95	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.77	0.03	17.26	8.69	7.24	0.45	19.31	6.17	0.00	0.02	99.93
T670	91	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.84	0.02	17.46	8.70	6.80	0.35	19.14	6.89	0.00	0.00	100.19
T670	142	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.25	0.60	15.72	9.03	7.67	0.41	19.17	6.66	0.03	0.02	99.56
T670	87	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.49	0.01	16.76	9.23	6.82	0.44	19.36	6.44	0.00	0.03	99.58
T670	96	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.83	0.12	16.79	9.32	7.08	0.40	19.41	6.55	0.01	0.00	100.51
T670	103	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.76	0.03	16.71	9.41	6.90	0.44	19.31	6.97	0.01	0.00	100.53
T670	115	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	38.69	1.11	13.45	10.27	8.26	0.45	14.38	11.64	0.03	0.02	98.30
T670	114	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	39.65	0.49	13.76	11.90	7.13	0.32	18.14	7.69	0.01	0.00	99.08
T671	13	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.97	0.18	21.03	3.14	7.49	0.46	21.13	4.48	0.01	0.00	98.88
T671	3	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.91	0.35	20.62	3.81	7.23	0.35	21.75	4.86	0.03	0.00	100.90
T671	10	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.08	0.35	20.34	4.17	7.85	0.37	20.49	5.36	0.04	0.00	100.05
T671	9	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.40	0.26	20.04	4.42	7.77	0.42	20.80	5.26	0.02	0.03	100.42

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T671	11	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.90	0.29	19.74	4.64	7.80	0.42	20.34	5.58	0.02	0.02	99.74
T671	20	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.30	0.36	19.46	4.70	8.45	0.48	18.74	6.96	0.01	0.02	99.48
T671	23	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.58	0.38	19.46	4.78	8.64	0.48	18.76	6.98	0.00	0.01	100.05
T671	6	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.59	0.38	19.36	4.87	8.64	0.48	18.99	6.75	0.00	0.00	100.05
T671	16	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.10	0.38	19.08	4.90	8.25	0.43	18.86	6.63	0.03	0.01	98.67
T671	18	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.73	0.28	19.45	4.94	7.50	0.36	21.20	5.41	0.03	0.00	99.91
T671	17	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.55	0.67	19.05	5.10	8.88	0.52	19.86	5.35	0.00	0.01	99.98
T671	7	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.99	0.29	19.76	5.17	7.38	0.40	20.92	5.17	0.02	0.00	100.11
T671	12	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.34	0.49	18.88	5.39	7.97	0.45	18.84	6.83	0.03	0.01	99.23
T671	1	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.09	0.43	19.31	5.47	7.25	0.33	21.17	5.72	0.00	0.00	100.77
T671	4	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	41.36	0.26	19.41	5.93	7.63	0.43	20.81	5.17	0.02	0.02	101.04
T671	21	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.80	0.46	18.42	6.31	8.21	0.40	19.01	7.06	0.03	0.00	100.69
T671	22	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.46	0.31	18.53	6.40	7.33	0.50	20.69	5.42	0.07	0.01	99.73
T671	5	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.78	0.47	18.33	6.60	8.15	0.42	18.90	7.05	0.00	0.00	100.69
T671	25	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.90	0.01	18.43	7.45	7.70	0.47	19.72	5.96	0.00	0.00	100.65
T671	19	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	37.43	0.31	16.35	7.54	12.08	0.52	15.94	6.63	0.02	0.03	96.85
T671	26	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.65	0.34	17.87	7.73	7.13	0.33	20.14	6.08	0.00	0.00	100.28
T671	52	94BCW3194	till	0.25-0.5	black	Cr-pyrope	40.30	0.24	17.50	7.77	7.60	0.48	19.79	5.95	0.04	0.00	99.67
T671	14	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	39.48	0.36	16.96	7.80	7.52	0.47	19.68	5.69	0.06	0.00	98.02
T671	8	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.47	0.34	17.54	7.87	7.16	0.40	20.00	6.02	0.02	0.01	99.82
T671	24	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.59	0.46	16.62	9.09	6.88	0.34	20.08	6.29	0.07	0.01	100.42
T671	2	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	40.63	0.04	16.76	9.41	6.99	0.45	19.59	6.50	0.00	0.01	100.36
T671	15	94BCW3194	till	0.25-0.5	purple	Cr-pyrope	39.65	0.03	16.19	10.00	7.08	0.46	19.30	6.04	0.02	0.00	98.78
T709	86	94BCW3194	till	0.5-0.84	rd-ong	Cr-pyrope	42.04	0.29	21.21	2.12	9.03	0.37	20.92	4.14	0.04	0.02	100.17
T709	81	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	41.03	0.36	19.89	3.53	7.52	0.39	21.14	4.84	0.03	0.00	98.71
T709	78	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	41.52	0.22	19.98	3.79	7.51	0.36	21.46	4.54	0.05	0.01	99.43
T709	80	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	41.42	0.29	19.49	4.39	7.63	0.42	20.52	5.02	0.00	0.00	99.18
T709	83	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.04	0.32	19.04	4.62	8.68	0.47	18.54	7.12	0.02	0.00	98.84
T709	77	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	42.17	0.03	19.69	4.66	7.94	0.43	20.79	4.68	0.00	0.02	100.40
T709	84	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.83	0.32	18.59	5.03	8.65	0.42	18.62	6.80	0.01	0.00	99.27
T709	72	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	42.04	0.22	19.03	5.23	7.48	0.39	20.75	5.10	0.00	0.00	100.23
T709	79	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	41.30	0.43	18.11	6.24	7.22	0.38	20.56	5.39	0.00	0.00	99.62
T709	71	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.96	0.03	18.74	6.36	7.16	0.44	19.99	5.85	0.00	0.00	99.52
T709	73	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	41.20	0.21	17.28	7.63	7.12	0.41	20.84	5.38	0.01	0.00	100.08
T709	85	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	39.79	0.03	17.41	7.71	7.95	0.59	18.36	6.48	0.02	0.02	98.37
T709	70	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.66	0.00	17.54	7.91	7.90	0.51	18.75	6.43	0.00	0.00	99.69
T709	76	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.13	0.52	16.68	7.92	7.10	0.39	19.77	6.19	0.07	0.01	98.77
T709	75	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.81	0.39	16.97	7.95	7.07	0.36	20.18	5.64	0.05	0.01	99.41
T709	82	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.19	0.00	17.27	8.19	7.21	0.45	18.73	7.37	0.00	0.01	99.41
T709	74	94BCW3194	till	0.5-0.84	purple	Cr-pyrope	40.54	0.29	15.58	9.91	6.67	0.40	19.88	6.39	0.01	0.02	99.70

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T692	133	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	42.29	0.25	20.84	3.00	7.13	0.30	21.85	4.76	0.01	0.01	100.44
T692	129	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.94	0.05	20.29	4.36	7.52	0.42	21.44	4.84	0.00	0.00	100.85
T692	105	94BCW3195	till	0.25-0.5	red	Cr-Pyrope	40.91	0.28	18.92	4.38	12.16	0.55	16.97	6.41	0.00	0.02	100.59
T692	122	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.81	0.52	19.35	4.43	8.33	0.46	19.45	6.44	0.03	0.00	100.82
T692	124	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.71	0.48	19.16	4.46	8.45	0.44	19.33	6.47	0.02	0.01	100.52
T692	138	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.88	0.16	19.54	4.62	8.03	0.42	20.56	5.31	0.00	0.01	100.52
T692	106	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	42.20	0.17	19.48	4.75	7.52	0.39	20.99	4.98	0.03	0.02	100.52
T692	97	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.92	0.40	19.15	4.76	7.87	0.43	19.91	6.05	0.04	0.01	100.53
T692	123	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.91	0.25	19.52	4.83	7.21	0.36	21.44	5.20	0.00	0.02	100.73
T692	128	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.31	19.22	4.87	8.14	0.37	20.24	5.82	0.05	0.01	100.65
T692	92	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.83	0.34	19.30	5.05	7.88	0.39	20.71	5.34	0.01	0.00	100.85
T692	121	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.60	0.41	18.94	5.29	7.56	0.42	20.83	5.46	0.03	0.00	100.53
T692	104	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.37	0.41	18.60	5.39	8.34	0.40	19.17	6.90	0.03	0.00	100.61
T692	130	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	37.54	0.33	18.02	5.49	7.56	0.31	18.72	4.79	0.25	0.18	93.18
T692	127	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.65	0.35	18.77	5.56	7.52	0.36	20.40	5.63	0.00	0.00	100.23
T692	91	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.36	0.17	19.02	5.59	7.20	0.35	20.84	5.30	0.03	0.01	99.86
T692	99	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.98	0.15	18.78	5.75	7.49	0.38	20.42	5.62	0.01	0.01	100.59
T692	90	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.74	0.06	18.53	6.10	7.42	0.40	20.60	5.29	0.04	0.00	100.18
T692	108	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.89	0.08	18.53	6.28	7.15	0.42	20.44	5.66	0.00	0.02	100.46
T692	93	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.77	0.60	18.09	6.31	8.11	0.49	19.72	5.54	0.04	0.01	100.68
T692	98	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.65	0.22	18.04	6.82	7.15	0.37	20.70	5.58	0.03	0.01	100.57
T692	125	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.91	0.34	17.85	6.83	7.43	0.38	20.20	5.86	0.00	0.02	100.83
T692	116	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.73	0.22	17.92	6.95	7.21	0.36	20.44	5.65	0.01	0.00	100.49
T692	134	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.28	0.04	18.10	7.02	7.47	0.43	19.95	5.92	0.00	0.00	100.21
T692	119	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.55	0.00	18.44	7.06	8.15	0.54	18.91	6.14	0.00	0.01	100.77
T692	96	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.25	0.08	18.03	7.07	7.70	0.50	20.12	5.83	0.03	0.01	100.62
T692	137	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.72	0.34	17.80	7.08	7.57	0.42	20.22	5.66	0.02	0.01	100.85
T692	126	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.79	0.10	18.13	7.08	7.27	0.43	20.48	5.55	0.01	0.01	100.85
T692	117	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.46	0.07	18.00	7.08	7.20	0.40	20.56	5.65	0.01	0.01	100.45
T692	100	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.95	0.30	17.66	7.50	7.14	0.40	20.84	5.36	0.04	0.00	101.19
T692	102	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.85	0.16	17.34	7.63	7.59	0.45	19.60	6.54	0.00	0.02	101.18
T692	94	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	40.54	0.20	16.60	7.67	11.27	0.57	16.76	6.70	0.01	0.00	100.33
T692	113	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.08	17.74	7.68	7.18	0.40	19.53	6.54	0.00	0.02	100.64
T692	136	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.26	0.52	17.04	7.69	7.45	0.40	20.30	5.88	0.04	0.01	100.59
T692	114	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	40.93	0.06	17.44	8.00	7.57	0.53	19.92	5.76	0.00	0.00	100.21
T692	103	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.36	0.00	17.56	8.01	7.80	0.57	19.09	6.37	0.00	0.02	100.78
T692	115	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.45	0.04	17.30	8.14	7.47	0.49	19.87	5.68	0.02	0.01	100.47
T692	118	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.03	0.22	16.86	8.14	7.55	0.51	19.00	6.40	0.00	0.00	99.72
T692	107	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.65	0.21	17.10	8.24	6.91	0.39	20.20	6.06	0.00	0.00	100.76
T692	135	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.18	0.09	17.38	8.31	7.29	0.41	20.41	5.10	0.02	0.01	100.19

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T692	131	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.39	16.71	8.35	7.35	0.42	19.84	6.44	0.03	0.00	100.79
T692	120	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.49	0.14	17.07	8.43	7.67	0.41	18.99	6.59	0.01	0.01	100.82
T692	95	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.40	0.73	16.18	8.55	6.85	0.38	20.11	6.49	0.03	0.00	100.72
T692	111	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.41	0.01	16.97	8.69	6.96	0.38	20.76	5.11	0.00	0.02	100.30
T692	132	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.43	0.00	16.83	8.85	7.29	0.42	19.02	7.04	0.00	0.00	100.87
T692	109	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.45	0.09	16.53	8.90	7.01	0.34	19.50	6.61	0.00	0.00	100.44
T692	101	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.39	0.05	16.50	9.15	7.11	0.43	19.81	6.07	0.00	0.01	100.52
T692	110	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.23	0.18	16.42	9.31	7.20	0.41	19.80	6.21	0.02	0.00	100.78
T692	112	94BCW3195	till	0.25-0.5	purple	Cr-Pyrope	41.72	0.05	16.50	9.65	7.01	0.45	20.95	4.47	0.01	0.00	100.81
T711	21	94BCW3195	till	0.5-0.84	orange	Cr-pyrope	41.59	0.41	19.86	4.16	8.53	0.39	20.59	5.66	0.05	0.00	101.23
T711	7	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	42.41	0.38	20.17	4.21	7.83	0.37	21.45	4.79	0.04	0.01	101.66
T711	12	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.33	0.27	20.10	4.25	7.87	0.41	21.17	4.79	0.02	0.02	100.21
T711	9	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.96	0.27	19.22	5.46	7.41	0.46	21.22	4.88	0.00	0.01	100.88
T711	20	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.88	0.10	19.59	5.82	7.16	0.56	21.25	4.85	0.03	0.01	101.23
T711	18	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.71	0.00	19.33	6.03	7.29	0.48	20.84	5.09	0.00	0.01	100.79
T711	17	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.28	0.03	19.36	6.11	7.31	0.50	21.03	4.94	0.01	0.01	100.56
T711	16	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.23	0.06	18.54	6.15	7.76	0.37	20.39	5.72	0.01	0.00	100.22
T711	14	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.08	0.05	19.31	6.25	7.19	0.53	20.94	5.32	0.01	0.00	100.67
T711	15	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.80	0.01	18.88	6.59	7.21	0.63	20.95	5.15	0.00	0.00	101.22
T711	5	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	40.85	0.00	18.89	6.61	7.72	0.49	20.08	5.89	0.00	0.00	100.54
T711	1	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.83	0.00	19.22	6.70	7.45	0.47	22.55	3.20	0.00	0.00	101.42
T711	10	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	40.84	0.00	18.82	6.96	8.04	0.47	19.73	6.37	0.01	0.00	101.23
T711	3	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.48	0.00	18.26	7.25	7.51	0.40	20.18	6.06	0.00	0.02	101.15
T711	8	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	40.99	0.48	17.29	7.97	7.24	0.41	20.24	5.93	0.02	0.02	100.57
T711	11	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.08	0.00	17.85	8.09	7.03	0.44	20.27	5.75	0.01	0.00	100.52
T711	2	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	40.92	0.17	17.65	8.18	7.12	0.41	20.32	6.14	0.03	0.01	100.94
T711	4	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.52	0.31	17.18	8.37	6.53	0.39	20.67	6.11	0.04	0.00	101.13
T711	6	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	41.22	0.19	16.51	8.56	7.43	0.35	19.32	6.67	0.00	0.00	100.24
T711	19	94BCW3195	till	0.5-0.84	purple	Cr-pyrope	40.75	0.01	17.20	8.76	7.90	0.53	18.55	6.98	0.01	0.01	100.70
T711	39	94BCW3196	till	0.5-0.84	purple	Cr-pyrope	41.83	0.31	19.11	5.88	7.88	0.45	21.06	5.05	0.01	0.01	101.60
T671	116	94BCW3199	till	0.25-0.5	purple	Cr-pyrope	40.23	0.35	18.20	6.47	7.22	0.41	20.32	5.27	0.02	0.02	98.50
T672	36	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.67	0.20	21.33	3.27	7.89	0.41	20.97	4.48	0.00	0.00	100.22
T672	22	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.66	0.27	21.14	3.36	7.80	0.37	21.32	4.58	0.02	0.00	100.52
T672	19	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	42.02	0.46	20.28	3.80	7.62	0.34	21.04	4.97	0.03	0.01	100.57
T672	17	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.93	0.26	20.10	4.60	7.62	0.36	20.95	5.15	0.05	0.00	101.02
T672	7	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.18	0.03	20.00	4.85	7.53	0.39	20.33	5.36	0.01	0.01	99.69
T672	18	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.55	0.32	19.34	4.91	8.08	0.43	19.66	6.15	0.06	0.00	100.48
T672	23	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.78	0.29	19.38	4.95	7.41	0.28	20.75	5.44	0.00	0.01	100.30
T672	5	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.54	0.31	19.61	4.96	8.35	0.46	19.43	6.53	0.01	0.00	101.19
T672	30	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.81	0.26	19.96	5.04	7.79	0.41	20.47	5.20	0.02	0.00	100.94

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	4	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	42.05	0.02	20.35	5.10	8.44	0.57	19.33	5.95	0.00	0.01	101.82
T672	21	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.97	0.35	19.57	5.25	7.64	0.37	20.30	5.53	0.02	0.00	100.99
T672	9	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.88	0.43	18.85	5.85	6.84	0.38	20.96	5.35	0.01	0.00	100.55
T672	24	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.77	0.13	19.46	5.91	6.91	0.38	20.36	5.61	0.00	0.00	100.51
T672	34	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	39.90	0.07	18.50	6.18	8.20	0.53	18.73	6.11	0.00	0.00	98.24
T672	33	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.27	0.02	19.12	6.26	8.01	0.46	19.07	6.02	0.02	0.02	100.26
T672	20	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.44	0.51	18.19	6.47	7.71	0.41	19.81	5.65	0.06	0.01	100.26
T672	16	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	40.83	0.25	18.04	6.57	7.06	0.34	19.93	6.09	0.00	0.00	99.11
T672	6	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	40.62	0.05	18.08	6.58	7.39	0.46	18.90	6.04	0.04	0.02	98.17
T672	11	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.49	0.06	18.99	6.78	7.51	0.48	20.57	4.23	0.01	0.00	100.13
T672	13	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.61	0.27	18.09	6.95	7.40	0.39	20.09	5.84	0.02	0.00	100.66
T672	14	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	40.60	0.12	18.21	7.02	7.29	0.41	19.85	5.57	0.00	0.00	99.06
T672	12	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.78	0.18	18.19	7.04	7.13	0.33	20.05	5.88	0.01	0.00	100.59
T672	26	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.41	0.21	18.08	7.11	7.31	0.40	19.93	5.88	0.05	0.01	100.39
T672	8	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.08	0.03	18.50	7.14	7.44	0.53	19.69	5.54	0.04	0.00	99.99
T672	28	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.43	0.17	18.42	7.14	7.02	0.43	20.45	5.37	0.00	0.00	100.43
T672	25	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.24	0.04	18.22	7.15	6.91	0.48	19.90	5.98	0.04	0.00	99.96
T672	27	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.40	0.02	18.56	7.67	6.97	0.43	22.75	2.17	0.02	0.02	99.98
T672	32	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.47	0.08	17.70	7.80	6.63	0.38	20.31	5.81	0.01	0.00	100.20
T672	35	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.36	0.39	16.96	7.97	7.11	0.36	19.81	6.29	0.02	0.01	100.28
T672	1	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.81	0.01	18.11	8.02	6.88	0.47	22.44	2.30	0.00	0.00	100.03
T672	2	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.30	0.25	17.15	8.48	6.88	0.41	19.95	6.30	0.00	0.01	100.75
T672	29	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.30	0.03	17.67	8.58	7.37	0.41	20.97	4.07	0.00	0.00	100.40
T672	3	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	41.09	0.12	16.74	9.25	7.32	0.43	19.62	6.36	0.00	0.00	100.93
T672	31	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	40.76	0.02	16.81	9.36	7.32	0.46	18.47	7.26	0.00	0.00	100.45
T672	10	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	40.93	0.05	16.72	9.38	6.94	0.35	19.67	6.05	0.00	0.00	100.08
T672	15	94BCW3200	till	0.25-0.5	purple	Cr-pyrope	39.95	0.23	15.72	9.68	9.70	0.55	16.77	7.57	0.03	0.00	100.20
T711	52	94BCW3200	till	0.5-0.84	purple	Cr-pyrope	41.29	0.21	19.78	4.41	7.94	0.38	21.12	5.17	0.00	0.00	100.29
T711	51	94BCW3200	till	0.5-0.84	purple	Cr-pyrope	41.40	0.04	19.61	5.31	7.53	0.51	20.42	5.58	0.01	0.00	100.40
T711	50	94BCW3200	till	0.5-0.84	purple	Cr-pyrope	41.22	0.00	19.24	5.72	7.53	0.36	20.85	5.27	0.00	0.00	100.18
T711	53	94BCW3200	till	0.5-0.84	purple	Cr-pyrope	40.61	0.00	18.15	7.36	7.14	0.40	20.17	6.21	0.00	0.00	100.04
T672	68	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.65	0.15	20.22	4.20	7.63	0.36	21.15	5.25	0.00	0.02	100.61
T672	66	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.31	0.43	19.67	4.67	8.12	0.35	19.41	6.32	0.01	0.00	100.29
T672	69	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.29	0.54	18.98	4.74	8.55	0.32	20.14	5.40	0.02	0.04	100.02
T672	65	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.28	0.31	19.65	4.98	7.44	0.33	20.54	5.42	0.01	0.04	100.01
T672	61	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.54	0.32	19.25	5.23	8.08	0.42	19.71	6.13	0.03	0.02	100.70
T672	64	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.28	0.03	19.61	5.82	7.42	0.46	20.20	5.92	0.00	0.02	100.76
T672	62	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.20	0.24	18.27	7.13	7.02	0.36	20.38	5.45	0.02	0.00	100.08
T672	67	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.13	0.07	18.06	7.47	7.04	0.51	20.42	5.58	0.00	0.01	100.29
T672	60	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	40.91	0.02	18.29	7.64	6.63	0.37	19.71	6.66	0.03	0.01	100.27

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	63	94BCW3201	till	0.25-0.5	purple	Cr-pyrope	41.16	0.02	18.04	8.19	7.02	0.43	20.88	4.10	0.00	0.00	99.83
T711	68	94BCW3201	till	0.5-0.84	purple	Cr-pyrope	41.41	0.42	19.15	5.48	7.38	0.43	21.23	4.95	0.05	0.00	100.49
T711	67	94BCW3201	till	0.5-0.84	purple	Cr-pyrope	41.72	0.16	17.41	8.16	6.98	0.43	20.55	5.53	0.00	0.01	100.96
T672	88	94BCW3202	till	0.25-0.5	purple	Cr-pyrope	41.28	0.00	19.24	6.27	8.51	0.55	18.69	6.42	0.00	0.01	100.97
T672	106	94BCW3203	till	0.25-0.5	purple	Cr-pyrope	41.76	0.17	19.33	6.07	7.26	0.42	20.82	5.12	0.00	0.00	100.93
T694	37	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.10	0.40	20.91	2.38	7.77	0.33	21.55	4.74	0.00	0.00	100.18
T694	61	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.94	0.18	20.87	3.15	8.12	0.34	21.14	4.50	0.02	0.01	100.28
T694	125	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.49	0.39	20.53	3.43	7.52	0.43	21.47	4.62	0.04	0.01	100.91
T694	116	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.85	0.24	20.52	3.48	7.53	0.43	21.59	4.68	0.01	0.00	100.33
T694	137	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.28	0.21	20.66	3.57	7.52	0.38	21.44	4.62	0.02	0.00	100.69
T694	139	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.85	0.06	20.47	3.88	8.89	0.51	19.41	5.76	0.01	0.00	100.84
T694	36	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.82	0.15	20.37	4.02	7.52	0.39	20.80	4.91	0.00	0.02	99.99
T694	109	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.67	0.08	20.34	4.11	7.95	0.35	20.87	4.86	0.00	0.01	100.24
T694	79	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.44	0.04	20.15	4.21	7.79	0.45	20.56	4.94	0.01	0.01	100.58
T694	145	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.58	0.35	18.97	4.21	8.34	0.44	19.42	5.33	0.02	0.02	97.68
T694	114	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.90	0.32	19.73	4.28	7.82	0.41	21.11	4.83	0.03	0.01	100.43
T694	131	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.39	0.22	20.02	4.32	7.18	0.41	21.74	4.57	0.03	0.01	100.89
T694	89	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.92	0.21	19.39	4.40	7.38	0.36	21.11	5.03	0.03	0.00	99.82
T694	134	94BCW3205	till	0.25-0.5	red	Cr-Pyrope	41.04	0.17	18.68	4.45	12.20	0.54	16.96	6.48	0.00	0.01	100.52
T694	127	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.20	0.00	20.17	4.52	7.10	0.41	20.96	5.29	0.02	0.01	100.68
T694	155	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.53	0.47	18.53	4.53	7.51	0.43	20.50	4.72	0.10	0.01	98.31
T694	111	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.64	0.41	19.19	4.72	8.32	0.47	18.87	6.89	0.01	0.01	100.51
T694	146	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	37.93	0.04	17.78	4.75	7.20	0.37	18.78	4.99	0.00	0.01	91.85
T694	62	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.34	0.26	19.67	4.78	8.41	0.54	19.64	5.50	0.02	0.01	100.16
T694	136	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.60	0.29	19.49	4.80	7.06	0.39	21.22	5.20	0.05	0.02	100.11
T694	141	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.68	0.52	19.24	4.80	8.25	0.54	20.19	5.44	0.07	0.00	100.73
T694	101	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.30	18.92	4.85	7.93	0.39	19.98	6.20	0.02	0.01	100.24
T694	130	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.05	0.43	19.25	4.91	8.14	0.44	19.37	6.50	0.03	0.00	101.13
T694	154	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.31	0.40	19.16	5.01	7.60	0.36	20.71	5.45	0.01	0.00	101.01
T694	80	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.41	18.89	5.11	8.53	0.42	18.52	7.17	0.01	0.02	100.70
T694	129	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.26	0.08	19.74	5.14	8.76	0.61	18.88	5.64	0.00	0.01	101.11
T694	123	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.71	0.32	19.00	5.15	8.13	0.42	19.91	5.73	0.00	0.01	100.38
T694	78	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.03	0.37	18.99	5.19	7.83	0.38	20.87	5.48	0.06	0.00	101.20
T694	117	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.73	0.27	18.97	5.21	8.14	0.41	20.05	5.63	0.01	0.00	100.40
T694	153	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.93	0.18	18.86	5.23	7.52	0.32	20.78	5.36	0.03	0.01	100.20
T694	95	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.69	0.51	18.57	5.23	8.02	0.48	19.06	6.99	0.02	0.00	100.57
T694	119	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.51	0.57	18.41	5.31	7.93	0.39	20.36	5.45	0.02	0.02	99.97
T694	55	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.71	0.42	18.73	5.32	8.47	0.36	19.70	6.19	0.00	0.00	100.90
T694	84	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.85	0.25	18.78	5.32	7.43	0.38	21.14	5.53	0.00	0.01	100.68
T694	108	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.98	0.38	19.00	5.34	7.18	0.36	21.15	5.33	0.02	0.00	100.74

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	65	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.69	0.24	19.32	5.34	8.09	0.44	19.46	5.71	0.05	0.01	100.34
T694	77	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.00	0.04	19.26	5.36	7.87	0.48	19.94	5.73	0.00	0.01	100.67
T694	110	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.64	0.02	19.59	5.43	7.49	0.48	20.53	5.17	0.00	0.01	100.36
T694	58	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.74	0.00	19.30	5.44	7.77	0.47	20.30	5.50	0.00	0.01	100.52
T694	152	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.77	0.75	18.60	5.45	8.01	0.42	20.42	5.45	0.04	0.01	100.91
T694	121	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.70	0.02	19.34	5.46	8.78	0.67	18.61	6.35	0.00	0.00	100.93
T694	149	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.47	0.25	18.50	5.54	8.29	0.41	19.57	6.20	0.02	0.01	100.26
T694	72	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.91	0.39	18.84	5.55	7.60	0.33	20.83	5.50	0.02	0.01	100.98
T694	107	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.58	0.32	18.60	5.57	7.85	0.43	20.07	6.02	0.02	0.01	100.46
T694	46	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.68	0.05	19.03	5.66	7.23	0.47	20.43	5.47	0.01	0.02	100.05
T694	93	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.40	0.34	18.40	5.70	8.52	0.42	19.03	6.62	0.00	0.02	100.45
T694	103	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.68	0.14	18.95	5.80	9.25	0.57	18.95	5.76	0.00	0.00	101.11
T694	83	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.14	0.28	18.43	5.88	8.72	0.39	18.37	7.26	0.00	0.00	100.48
T694	124	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.97	0.04	19.02	5.89	7.28	0.41	20.68	5.32	0.02	0.01	100.63
T694	140	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.86	0.29	18.56	5.93	7.89	0.35	20.02	5.65	0.04	0.11	100.70
T694	97	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.66	0.07	19.02	5.94	7.11	0.43	21.35	4.74	0.01	0.01	100.34
T694	66	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.59	0.01	19.02	5.96	8.22	0.46	19.60	5.92	0.01	0.02	100.81
T694	82	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.98	0.26	18.26	6.03	7.68	0.39	20.65	5.67	0.00	0.01	100.93
T694	50	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.11	0.23	18.25	6.17	7.71	0.34	20.47	5.57	0.02	0.00	100.84
T694	120	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.39	0.00	18.78	6.18	7.99	0.50	19.67	5.65	0.00	0.02	100.18
T694	59	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.46	0.00	18.78	6.31	8.29	0.59	18.98	6.19	0.00	0.00	100.60
T694	96	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.03	0.03	18.64	6.38	7.29	0.42	20.31	5.77	0.00	0.00	100.87
T694	33	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.92	0.12	18.50	6.44	6.76	0.30	20.88	5.51	0.01	0.00	100.44
T694	67	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.02	0.05	18.86	6.44	7.34	0.51	21.52	3.86	0.00	0.01	100.60
T694	98	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.38	0.36	17.93	6.57	7.50	0.47	19.86	6.10	0.01	0.00	100.18
T694	76	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.83	0.20	17.91	6.61	7.55	0.39	20.06	5.92	0.00	0.01	100.46
T694	118	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.08	0.02	17.92	6.67	6.97	0.36	20.20	5.90	0.00	0.00	100.11
T694	150	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.46	0.37	18.27	6.69	7.25	0.46	20.65	5.46	0.04	0.02	100.65
T694	74	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.54	0.00	18.36	6.74	7.65	0.45	19.78	5.90	0.00	0.01	100.42
T694	128	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.37	0.11	18.56	6.74	8.18	0.52	18.95	6.05	0.01	0.00	100.50
T694	148	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.65	0.38	17.77	6.81	7.39	0.36	20.08	5.73	0.00	0.03	100.20
T694	49	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.40	0.01	18.26	6.88	8.03	0.48	19.50	5.99	0.00	0.00	100.55
T694	39	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.60	0.00	18.16	6.95	7.93	0.45	19.97	5.72	0.04	0.01	100.83
T694	68	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.65	0.21	17.46	6.96	7.33	0.42	20.27	5.42	0.04	0.00	99.76
T694	102	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.83	0.08	18.34	6.99	7.86	0.56	21.64	3.42	0.00	0.00	100.71
T694	81	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.56	0.22	17.62	7.01	7.61	0.37	20.03	5.94	0.01	0.01	100.39
T694	71	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.70	0.00	18.31	7.04	7.88	0.51	20.44	4.78	0.01	0.03	100.69
T694	126	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.00	0.19	17.45	7.07	7.52	0.37	19.73	5.89	0.02	0.01	100.23
T694	115	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.38	0.20	17.81	7.09	8.23	0.48	19.85	5.51	0.00	0.00	100.55
T694	132	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.10	0.02	18.33	7.16	7.06	0.44	19.78	6.17	0.00	0.00	101.06

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	88	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.41	0.05	18.06	7.24	7.23	0.41	20.25	5.61	0.02	0.02	100.27
T694	70	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.41	0.27	17.53	7.24	6.80	0.39	20.53	5.77	0.01	0.01	99.95
T694	133	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.24	17.44	7.33	7.56	0.35	20.16	5.50	0.00	0.00	100.07
T694	91	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.52	0.00	18.02	7.34	7.10	0.46	21.77	3.63	0.02	0.02	99.87
T694	156	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.10	0.39	16.89	7.46	7.46	0.31	19.99	5.94	0.03	0.00	99.56
T694	92	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.37	0.05	17.74	7.46	7.53	0.50	20.02	5.35	0.00	0.01	100.04
T694	31	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.64	0.08	17.89	7.48	7.41	0.39	21.40	3.85	0.00	0.01	100.15
T694	42	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.02	17.73	7.67	7.72	0.42	19.68	5.92	0.00	0.01	100.45
T694	138	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.55	0.19	17.50	7.68	7.24	0.48	19.96	5.92	0.03	0.00	100.55
T694	143	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.92	0.28	17.15	7.70	7.25	0.36	20.04	5.99	0.02	0.01	99.71
T694	135	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.56	0.01	17.82	7.72	7.03	0.47	19.91	6.32	0.00	0.00	100.84
T694	63	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.28	0.41	16.93	7.86	7.91	0.42	19.28	6.18	0.03	0.02	100.31
T694	53	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.62	0.32	17.13	7.93	7.22	0.40	20.13	5.95	0.03	0.02	100.74
T694	113	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.57	0.43	16.99	7.94	7.17	0.44	20.15	5.84	0.04	0.00	100.57
T694	51	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.22	17.12	7.97	7.21	0.35	20.17	6.05	0.01	0.00	100.72
T694	147	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.30	0.07	17.56	8.02	7.46	0.56	21.10	3.87	0.01	0.00	99.96
T694	34	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.48	0.07	17.60	8.04	7.03	0.43	20.92	5.00	0.00	0.01	100.57
T694	40	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.38	0.06	17.48	8.04	7.32	0.47	20.55	5.32	0.00	0.00	100.62
T694	44	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.39	0.00	17.78	8.05	7.34	0.50	21.74	3.28	0.01	0.01	100.11
T694	122	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.35	0.11	17.37	8.09	7.44	0.45	19.86	5.37	0.01	0.00	100.04
T694	35	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.10	0.39	16.55	8.16	7.94	0.45	19.09	6.65	0.03	0.00	100.37
T694	104	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.41	16.47	8.19	7.61	0.44	19.09	6.98	0.04	0.01	100.51
T694	60	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.42	0.13	16.88	8.30	7.36	0.31	19.47	6.56	0.00	0.01	100.43
T694	47	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.67	0.04	17.41	8.34	7.42	0.54	20.54	4.96	0.00	0.00	100.93
T694	99	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.66	0.05	17.48	8.35	6.93	0.43	21.20	4.38	0.03	0.00	100.50
T694	56	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.79	0.13	17.27	8.43	7.92	0.58	18.58	6.85	0.00	0.00	100.55
T694	57	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.54	0.22	16.95	8.46	6.89	0.40	19.98	6.41	0.00	0.00	100.84
T694	112	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.04	17.20	8.63	6.90	0.40	21.21	4.74	0.00	0.01	100.75
T694	87	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.31	0.08	17.08	8.72	7.47	0.51	19.10	6.67	0.00	0.01	100.95
T694	52	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.21	0.24	16.72	8.74	7.37	0.44	19.75	5.95	0.03	0.00	100.46
T694	38	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.15	0.00	16.98	8.80	6.87	0.45	20.38	5.41	0.00	0.01	100.04
T694	54	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.05	0.06	16.76	8.87	7.11	0.44	19.27	6.90	0.01	0.01	100.47
T694	32	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.34	16.25	8.89	6.94	0.34	19.83	6.39	0.01	0.01	100.27
T694	144	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.91	0.06	16.56	9.06	7.26	0.48	19.09	7.07	0.00	0.00	100.49
T694	73	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.21	0.06	16.63	9.18	7.22	0.42	19.24	6.97	0.00	0.00	100.92
T694	48	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.97	0.02	16.43	9.23	7.17	0.40	19.20	6.89	0.00	0.00	100.31
T694	75	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.61	0.00	16.39	9.27	7.20	0.42	18.81	7.20	0.03	0.00	99.92
T694	142	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.50	0.04	16.61	9.30	7.26	0.52	18.98	6.41	0.00	0.02	99.62
T694	85	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.89	0.00	16.47	9.39	7.77	0.51	18.38	7.28	0.00	0.00	100.70
T694	100	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.96	0.16	16.24	9.42	7.08	0.50	18.83	7.35	0.00	0.00	100.54

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	45	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.27	0.52	15.45	9.53	7.78	0.37	19.31	6.84	0.04	0.01	101.11
T694	106	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.39	0.01	16.00	9.60	6.94	0.43	19.50	6.39	0.00	0.01	99.28
T694	90	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.30	0.07	16.31	9.65	7.12	0.46	21.65	3.56	0.02	0.00	100.13
T694	151	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.06	0.25	15.60	9.65	7.42	0.45	19.33	6.64	0.00	0.01	100.40
T694	69	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.81	0.20	15.84	9.74	7.20	0.44	19.60	6.44	0.02	0.01	100.28
T694	105	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.41	0.63	14.70	9.99	7.69	0.39	18.80	6.96	0.01	0.01	99.60
T694	41	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.41	0.12	15.30	10.08	7.24	0.40	18.54	7.48	0.00	0.00	99.56
T694	43	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.44	0.00	15.97	10.34	6.88	0.44	21.54	3.92	0.00	0.01	100.55
T694	94	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.69	0.00	14.83	10.62	7.36	0.45	18.27	7.53	0.00	0.02	99.77
T694	64	94BCW3205	till	0.25-0.5	blue	Cr-Pyrope	40.51	0.05	14.04	11.92	7.06	0.43	17.95	8.14	0.01	0.02	100.13
T694	86	94BCW3205	till	0.25-0.5	greenblue	Cr-Pyrope	39.76	0.18	12.96	12.50	10.84	0.57	15.13	8.69	0.01	0.00	100.63
T695	43	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.89	0.29	21.37	2.26	7.42	0.32	21.55	4.68	0.01	0.00	100.78
T695	34	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.10	0.20	20.34	3.34	7.79	0.36	21.29	4.86	0.03	0.01	100.32
T695	36	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.90	0.35	19.91	3.58	7.98	0.32	20.98	5.12	0.04	0.00	100.18
T695	33	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.04	0.44	19.99	3.69	8.05	0.35	20.71	5.04	0.04	0.00	100.34
T695	32	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.90	0.45	20.22	3.70	7.86	0.41	21.08	4.67	0.02	0.00	100.30
T695	31	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.43	0.57	19.52	3.70	7.66	0.35	21.54	5.01	0.04	0.00	100.81
T695	41	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.16	0.30	20.00	3.97	7.05	0.36	21.38	5.01	0.02	0.01	100.25
T695	39	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.13	0.23	20.18	3.99	7.90	0.42	21.05	4.65	0.05	0.01	100.60
T695	29	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.98	0.48	19.48	3.99	7.56	0.34	21.37	5.03	0.01	0.01	100.24
T695	22	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.31	0.10	19.74	4.27	7.56	0.39	21.10	5.13	0.00	0.00	100.59
T695	37	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.72	0.47	19.01	4.36	8.46	0.38	19.52	6.40	0.00	0.02	100.34
T695	24	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.08	0.02	20.21	4.43	7.95	0.55	20.24	5.23	0.01	0.00	100.73
T695	7	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.18	0.08	19.84	4.62	7.14	0.29	21.42	5.07	0.00	0.02	100.66
T695	8	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.76	0.28	19.21	4.86	7.77	0.39	20.79	5.34	0.03	0.00	100.41
T695	45	94BCW3205	till	0.25-0.5	red	Cr-Pyrope	40.40	0.24	18.41	4.86	12.16	0.53	16.70	6.68	0.01	0.00	99.99
T695	2	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.60	0.36	18.53	4.91	8.45	0.39	19.07	6.85	0.00	0.01	100.17
T695	28	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.52	0.30	18.90	5.12	8.52	0.50	19.15	6.89	0.01	0.00	100.90
T695	20	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.97	0.26	18.99	5.21	7.50	0.38	20.73	5.49	0.00	0.01	100.55
T695	38	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.34	0.28	18.76	5.24	8.46	0.43	19.00	6.96	0.01	0.00	100.47
T695	30	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.45	0.32	18.72	5.33	8.43	0.39	19.31	6.13	0.00	0.00	100.09
T695	14	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.19	0.17	18.91	5.75	7.09	0.38	20.96	5.17	0.03	0.01	99.67
T695	21	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.07	0.05	18.66	5.98	8.69	0.57	19.88	4.89	0.03	0.00	99.82
T695	10	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.63	0.29	18.35	6.11	7.11	0.37	20.70	5.66	0.00	0.01	100.24
T695	23	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.29	0.00	19.15	6.16	8.03	0.57	19.27	6.27	0.02	0.00	100.75
T695	6	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.73	0.22	18.33	6.37	7.01	0.37	21.09	5.39	0.03	0.01	100.54
T695	12	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.98	0.11	18.66	6.46	7.54	0.53	19.33	6.00	0.00	0.00	100.61
T695	13	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.85	0.00	18.53	6.65	7.19	0.42	20.13	6.13	0.00	0.01	100.91
T695	11	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.33	0.06	18.70	6.67	7.65	0.43	19.71	6.10	0.02	0.01	100.67
T695	18	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.74	0.21	18.16	6.79	7.31	0.39	20.49	5.57	0.00	0.01	100.67

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T695	15	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.12	0.01	18.24	7.02	6.96	0.46	20.21	6.08	0.02	0.01	100.11
T695	17	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.09	0.00	17.99	7.33	8.36	0.63	18.03	7.11	0.00	0.01	100.54
T695	9	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.26	0.36	17.35	7.59	7.37	0.41	20.04	5.66	0.06	0.01	100.11
T695	26	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.78	0.05	17.92	7.68	7.55	0.48	19.76	6.18	0.00	0.00	101.41
T695	25	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.76	0.13	17.51	7.69	6.95	0.35	20.39	6.09	0.01	0.01	100.88
T695	5	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.62	0.34	17.36	7.87	7.53	0.42	20.17	5.85	0.06	0.00	101.21
T695	27	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.01	0.12	17.32	7.88	7.31	0.36	20.03	6.09	0.02	0.01	101.15
T695	1	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	42.26	0.03	18.07	7.93	7.24	0.50	21.56	3.58	0.01	0.00	101.16
T695	4	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.59	0.07	17.14	8.23	6.92	0.33	19.81	6.34	0.00	0.00	100.43
T695	19	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.40	0.26	15.88	8.55	7.27	0.35	19.74	6.59	0.01	0.00	100.04
T695	3	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	41.44	0.28	16.56	8.83	7.17	0.35	19.93	6.33	0.01	0.00	100.88
T695	16	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	40.81	0.51	15.28	9.95	6.93	0.41	19.39	6.53	0.06	0.00	99.87
T695	44	94BCW3205	till	0.25-0.5	purple	Cr-Pyrope	39.86	0.42	14.57	10.62	10.12	0.60	15.97	8.19	0.03	0.00	100.37
T710	27	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	42.23	0.19	20.39	3.56	8.06	0.34	20.71	5.46	0.01	0.02	100.95
T710	2	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	42.78	0.36	20.28	3.95	7.65	0.42	21.75	4.86	0.04	0.01	102.10
T710	15	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.96	0.55	19.57	4.19	7.69	0.30	21.41	5.09	0.02	0.01	99.80
T710	5	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.81	0.33	19.66	4.30	7.77	0.36	20.84	5.03	0.01	0.02	100.13
T710	18	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	42.04	0.13	19.80	4.39	7.93	0.37	20.70	5.25	0.02	0.00	100.63
T710	26	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	42.38	0.04	20.29	4.84	7.49	0.47	21.69	5.02	0.01	0.00	102.22
T710	17	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.10	0.45	19.18	4.97	8.51	0.40	19.35	6.85	0.03	0.00	100.83
T710	20	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.99	0.07	19.70	5.22	8.42	0.46	20.20	5.58	0.01	0.01	101.66
T710	10	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.79	0.30	18.94	5.35	7.76	0.39	21.07	5.27	0.02	0.01	99.89
T710	24	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.46	0.15	19.50	5.56	7.39	0.44	21.40	5.32	0.00	0.00	101.21
T710	13	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.97	0.17	19.03	5.63	7.19	0.45	21.41	5.04	0.03	0.01	99.93
T710	25	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.74	0.11	18.86	5.71	7.44	0.38	21.16	5.63	0.02	0.01	101.04
T710	22	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	43.73	0.06	19.44	6.69	7.48	0.44	21.65	4.42	0.03	0.11	104.04
T710	19	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.82	0.06	18.54	6.80	7.39	0.47	20.25	5.65	0.00	0.03	100.00
T710	3	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.05	0.61	17.61	6.82	7.81	0.48	18.70	8.07	0.02	0.02	101.18
T710	8	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.24	0.02	18.51	6.85	7.36	0.41	20.53	5.48	0.00	0.00	100.40
T710	7	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.46	0.14	18.27	7.23	7.09	0.43	20.38	5.54	0.00	0.00	100.54
T710	12	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.69	0.07	18.02	7.32	7.22	0.45	20.16	6.01	0.02	0.01	99.96
T710	28	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.25	0.03	18.34	7.47	7.36	0.45	21.18	5.00	0.02	0.02	101.11
T710	21	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.36	0.16	17.64	7.69	7.73	0.38	20.01	6.05	0.04	0.01	100.09
T710	14	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.77	0.00	17.72	7.98	7.29	0.57	20.38	5.39	0.00	0.00	100.09
T710	23	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.86	0.20	17.40	8.07	7.27	0.45	20.85	5.56	0.06	0.00	101.72
T710	9	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.74	0.13	17.49	8.13	7.11	0.43	19.66	6.42	0.01	0.01	100.15
T710	6	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.50	0.21	16.72	8.40	7.13	0.41	20.28	6.21	0.02	0.00	100.88
T710	11	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.80	0.07	16.86	8.63	7.12	0.43	19.41	6.75	0.00	0.02	100.09
T710	1	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.26	0.42	16.53	8.69	7.67	0.41	19.93	6.34	0.00	0.01	101.26
T710	4	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.97	0.21	16.04	9.50	7.16	0.50	20.14	5.80	0.05	0.01	100.38

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T711	80	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.73	0.58	20.07	3.60	7.72	0.39	21.44	5.00	0.02	0.01	100.54
T711	102	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.88	0.38	20.69	3.72	7.90	0.34	21.34	4.55	0.04	0.02	99.86
T711	79	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.66	0.19	19.81	4.35	7.63	0.35	21.16	5.14	0.04	0.00	100.33
T711	95	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.80	0.04	20.00	4.99	7.49	0.41	21.71	4.79	0.00	0.01	101.24
T711	101	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.24	0.20	19.41	5.39	7.21	0.47	21.40	4.88	0.02	0.01	100.22
T711	83	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.45	0.01	19.56	5.41	7.75	0.50	20.19	5.57	0.00	0.02	100.46
T711	97	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.04	0.07	19.04	5.42	8.48	0.52	19.49	5.47	0.00	0.24	99.77
T711	100	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.22	0.16	19.22	5.49	7.15	0.40	21.51	5.00	0.04	0.01	100.21
T711	86	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.60	0.06	19.70	5.52	8.23	0.61	20.10	5.53	0.00	0.01	101.37
T711	107	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.57	0.00	19.63	5.55	7.36	0.44	22.59	2.97	0.00	0.01	100.13
T711	82	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.35	0.23	18.64	5.79	7.56	0.37	20.43	5.55	0.01	0.00	99.91
T711	96	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.52	0.01	18.74	6.43	7.64	0.41	20.41	5.92	0.00	0.00	101.09
T711	103	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.49	0.08	18.32	7.01	7.21	0.45	20.03	5.77	0.01	0.03	100.40
T711	90	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.65	0.06	18.47	7.09	7.33	0.38	20.10	6.07	0.00	0.00	100.14
T711	106	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.20	0.09	18.42	7.10	7.10	0.45	20.92	5.80	0.00	0.00	101.09
T711	92	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.81	0.00	18.13	7.22	7.79	0.54	19.51	5.98	0.01	0.01	100.00
T711	88	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.34	0.01	18.05	7.37	8.02	0.51	19.53	6.04	0.00	0.00	100.87
T711	87	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.23	0.03	18.52	7.40	7.42	0.46	19.85	5.88	0.00	0.00	100.78
T711	105	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.98	0.04	17.75	8.23	7.31	0.49	20.59	5.00	0.00	0.02	100.41
T711	89	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.06	0.05	17.39	8.38	7.09	0.43	20.01	6.13	0.03	0.00	100.56
T711	93	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.54	0.00	17.72	8.51	7.52	0.53	21.58	3.70	0.03	0.00	101.13
T711	91	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	41.18	0.04	17.05	8.54	7.18	0.46	19.70	6.62	0.02	0.01	100.79
T711	98	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.30	0.13	16.80	8.73	7.31	0.47	19.48	6.22	0.01	0.00	99.46
T711	104	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.82	0.00	16.49	9.07	7.18	0.43	19.73	6.81	0.02	0.00	100.54
T711	85	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.59	0.07	16.72	9.13	7.07	0.43	20.12	5.87	0.03	0.00	100.01
T711	84	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.09	0.04	16.68	9.58	7.02	0.43	19.72	6.62	0.00	0.00	100.18
T711	99	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.71	0.11	16.15	9.71	7.38	0.51	19.18	7.31	0.02	0.01	101.07
T711	94	94BCW3205	till	0.5-0.84	purple	Cr-pyrope	40.40	0.21	15.33	10.05	7.41	0.45	18.97	7.34	0.00	0.02	100.16
T695	35	94BCW3205	till	0.25-0.5	purple	Pyrope	42.84	0.55	21.41	1.95	7.52	0.38	21.76	4.48	0.02	0.00	100.90
T711	78	94BCW3205	till	0.5-0.84	purple	pyrope	41.56	0.15	21.96	1.88	8.38	0.40	21.99	4.20	0.01	0.01	100.52
T711	81	94BCW3205	till	0.5-0.84	purple	pyrope	42.26	0.18	21.94	1.96	8.44	0.41	21.54	4.24	0.02	0.00	101.01
T672	159	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.98	0.37	21.33	2.72	7.36	0.35	21.55	4.71	0.04	0.01	100.41
T672	151	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.49	0.16	20.88	3.96	8.25	0.43	20.87	4.69	0.00	0.00	100.72
T672	128	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.97	0.12	20.38	4.22	7.41	0.27	21.34	5.24	0.00	0.02	100.97
T672	162	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	42.11	0.29	20.56	4.32	7.57	0.46	20.91	4.89	0.04	0.01	101.17
T672	161	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.88	0.35	19.85	4.58	7.76	0.39	20.92	5.07	0.03	0.00	99.83
T672	163	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.09	0.37	19.40	4.76	8.53	0.37	18.62	7.35	0.01	0.00	100.50
T672	134	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.30	0.24	19.94	4.91	7.41	0.41	21.30	4.91	0.02	0.00	100.44
T672	143	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	42.17	0.03	20.38	4.97	6.76	0.41	22.97	2.58	0.02	0.01	100.30
T672	154	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.30	0.39	19.09	5.32	8.09	0.40	19.14	6.54	0.04	0.01	100.32

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	146	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.57	0.33	19.32	5.36	6.89	0.39	20.84	5.43	0.02	0.00	100.14
T672	158	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.03	0.30	19.13	5.66	7.34	0.40	20.61	5.08	0.04	0.01	99.60
T672	142	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.62	0.02	19.47	5.76	7.42	0.42	20.20	5.66	0.00	0.01	100.57
T672	135	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.89	0.26	19.07	5.88	7.38	0.44	20.96	5.08	0.04	0.00	100.01
T672	147	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.29	0.09	19.20	5.94	6.91	0.35	20.55	5.49	0.03	0.02	99.87
T672	153	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.81	0.51	18.92	6.02	7.08	0.36	20.70	5.49	0.05	0.00	100.93
T672	140	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.02	0.37	18.53	6.04	7.42	0.35	19.93	5.89	0.00	0.01	99.55
T672	156	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.96	0.02	19.13	6.17	6.78	0.40	20.44	5.39	0.00	0.00	99.29
T672	132	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.24	0.25	18.74	6.17	6.90	0.31	20.63	5.44	0.00	0.01	99.70
T672	139	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.73	0.05	19.12	6.17	7.83	0.45	19.28	6.04	0.00	0.00	99.67
T672	148	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.36	0.23	18.49	6.38	7.18	0.36	20.29	5.63	0.00	0.00	99.93
T672	130	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.11	0.32	18.50	6.39	7.26	0.43	20.40	5.56	0.03	0.00	99.99
T672	149	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.70	0.34	18.82	6.40	6.43	0.33	21.29	5.34	0.03	0.00	100.67
T672	150	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.19	0.03	18.98	6.44	7.33	0.39	19.68	5.95	0.00	0.00	99.99
T672	129	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.39	0.17	18.48	7.00	7.44	0.37	20.51	5.41	0.06	0.00	100.83
T672	138	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.91	0.08	18.52	7.08	7.11	0.44	20.36	5.76	0.04	0.00	100.30
T672	141	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.16	0.02	18.04	7.36	6.96	0.41	19.58	6.36	0.00	0.01	99.90
T672	133	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.86	0.21	17.75	7.70	6.71	0.41	20.47	6.06	0.00	0.01	101.18
T672	145	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.09	0.03	18.05	8.02	6.67	0.41	19.85	6.23	0.03	0.00	100.37
T672	131	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.34	0.35	17.01	8.24	7.31	0.42	19.22	6.41	0.03	0.00	100.33
T672	160	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.88	0.06	17.65	8.24	7.45	0.51	20.95	4.16	0.00	0.00	99.89
T672	137	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.20	0.01	17.44	8.28	6.79	0.40	20.21	5.71	0.00	0.00	100.03
T672	164	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.55	0.07	17.34	8.43	7.10	0.40	19.88	6.28	0.03	0.02	100.09
T672	144	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.33	0.16	17.26	8.53	6.86	0.35	19.93	6.36	0.02	0.00	100.78
T672	155	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.96	0.02	17.34	8.81	6.87	0.43	20.47	5.49	0.01	0.00	100.39
T672	152	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.50	0.00	17.03	8.91	6.53	0.43	19.67	6.73	0.00	0.02	99.80
T672	157	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.48	0.07	16.24	9.45	6.89	0.45	18.73	7.33	0.00	0.00	99.64
T672	136	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.93	0.00	16.89	9.66	6.94	0.42	20.92	4.80	0.01	0.02	100.58
T673	15	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.37	0.01	20.88	4.29	7.87	0.59	20.02	5.68	0.02	0.00	100.74
T673	7	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.42	0.35	19.51	4.64	7.59	0.38	20.46	5.29	0.05	0.02	99.70
T673	9	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.07	0.36	20.21	4.66	7.93	0.40	20.02	6.12	0.04	0.02	100.83
T673	10	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.14	0.30	19.78	4.99	7.68	0.36	20.89	5.49	0.04	0.01	100.67
T673	8	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.54	0.68	19.16	5.29	7.45	0.37	21.17	5.70	0.05	0.02	101.41
T673	11	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.99	0.35	18.98	5.57	8.05	0.43	19.42	6.29	0.06	0.01	100.13
T673	13	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.78	0.07	19.36	5.72	7.59	0.38	20.18	5.40	0.01	0.02	99.51
T673	2	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	42.08	0.06	20.25	5.91	7.21	0.38	20.34	6.28	0.01	0.01	102.51
T673	14	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.97	0.51	18.88	6.04	7.15	0.34	20.92	5.81	0.04	0.01	100.66
T673	3	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.77	0.33	19.02	6.23	7.09	0.36	20.84	5.67	0.08	0.01	101.39
T673	12	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	40.81	0.38	17.78	7.00	7.66	0.37	20.20	5.92	0.00	0.01	100.13
T673	4	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.31	0.00	18.45	7.25	7.78	0.47	19.17	6.19	0.00	0.01	100.63

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	5	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.30	0.08	18.07	7.79	6.93	0.39	19.57	6.40	0.02	0.01	100.54
T673	6	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.20	0.22	17.13	8.62	6.15	0.32	20.89	5.85	0.03	0.01	100.40
T673	1	94BCW3206	till	0.25-0.5	purple	Cr-pyrope	41.38	0.29	17.02	8.80	7.41	0.33	19.73	6.81	0.03	0.00	101.81
T712	6	94BCW3206	till	0.5-0.84	purple	Cr-pyrope	41.86	0.44	20.00	3.70	7.38	0.37	21.11	5.01	0.03	0.00	99.92
T712	4	94BCW3206	till	0.5-0.84	purple	Cr-pyrope	40.91	0.32	18.94	4.92	8.62	0.44	19.04	6.75	0.00	0.01	99.95
T712	1	94BCW3206	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	18.64	6.55	8.24	0.63	19.30	6.00	0.00	0.00	100.56
T712	2	94BCW3206	till	0.5-0.84	purple	Cr-pyrope	41.11	0.00	17.73	7.33	7.48	0.49	19.55	5.64	0.00	0.00	99.32
T712	3	94BCW3206	till	0.5-0.84	purple	Cr-pyrope	40.68	0.24	16.20	8.80	7.18	0.42	19.58	6.19	0.00	0.01	99.28
T712	5	94BCW3206	till	0.5-0.84	purple	pyrope	41.93	0.19	21.65	1.94	7.81	0.39	21.28	4.14	0.01	0.02	99.36
T673	159	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.35	0.24	21.67	2.59	8.04	0.37	21.13	4.36	0.02	0.00	99.76
T673	147	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.04	0.28	21.00	3.03	7.81	0.38	20.95	4.86	0.02	0.01	99.37
T673	136	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.66	0.25	20.72	3.42	7.40	0.34	20.81	4.59	0.06	0.01	98.25
T673	116	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.60	0.05	21.28	3.73	7.25	0.42	21.53	4.86	0.01	0.01	100.74
T673	155	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.65	0.50	20.64	4.00	7.68	0.41	20.83	5.41	0.06	0.00	101.17
T673	149	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.02	0.37	19.83	4.24	7.72	0.32	20.60	5.27	0.02	0.02	99.41
T673	146	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.73	0.49	19.99	4.26	6.83	0.40	21.14	5.04	0.05	0.01	98.95
T673	150	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.87	0.48	19.81	4.30	8.50	0.36	19.62	5.98	0.01	0.00	99.93
T673	153	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.57	0.47	19.98	4.35	8.47	0.41	19.64	6.21	0.00	0.01	101.09
T673	145	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.86	0.36	19.75	4.46	7.73	0.40	20.70	5.20	0.03	0.00	99.49
T673	117	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.27	0.21	20.28	4.50	7.21	0.40	20.98	4.97	0.01	0.01	99.84
T673	143	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.67	0.43	19.53	4.52	8.39	0.47	19.20	6.43	0.04	0.01	99.69
T673	125	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	42.35	0.08	21.14	4.53	7.23	0.39	21.52	5.13	0.00	0.00	102.36
T673	157	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.56	0.39	20.21	4.64	7.27	0.33	21.57	5.10	0.02	0.02	101.10
T673	152	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.87	0.35	19.55	4.74	8.54	0.37	18.59	7.20	0.02	0.02	100.25
T673	160	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.54	0.38	19.33	4.74	8.35	0.40	18.40	7.23	0.01	0.00	99.38
T673	134	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.67	0.51	19.91	4.77	8.36	0.43	20.69	4.90	0.06	0.00	101.30
T673	154	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.65	0.36	19.41	4.80	8.50	0.42	19.02	6.87	0.03	0.00	100.05
T673	141	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.75	0.20	19.79	4.88	8.28	0.42	20.32	5.14	0.06	0.01	99.84
T673	156	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.98	0.57	19.33	5.04	7.87	0.42	18.99	7.22	0.07	0.00	100.49
T673	122	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.51	0.00	20.24	5.14	7.29	0.40	20.89	4.81	0.00	0.01	100.28
T673	148	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.91	0.38	19.41	5.21	7.59	0.40	20.42	5.28	0.04	0.01	99.65
T673	151	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.43	0.56	19.17	5.29	7.61	0.42	20.66	5.15	0.06	0.01	99.34
T673	158	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	39.19	0.65	17.89	5.33	8.37	0.41	18.75	5.83	0.06	0.00	96.47
T673	121	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.61	0.27	19.75	5.35	7.14	0.37	21.17	5.42	0.00	0.00	101.07
T673	138	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.56	0.50	18.85	5.45	7.68	0.46	18.77	7.55	0.03	0.01	99.87
T673	129	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.82	0.41	19.39	5.60	7.66	0.39	21.66	5.63	0.01	0.03	102.59
T673	133	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.11	0.13	19.78	5.61	7.34	0.38	21.60	5.17	0.01	0.01	101.13
T673	130	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.58	0.28	19.74	5.75	7.47	0.37	21.03	5.21	0.05	0.01	101.50
T673	105	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.07	0.31	19.11	5.91	7.65	0.42	20.59	5.32	0.02	0.00	100.40
T673	139	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.75	0.34	18.84	5.91	7.31	0.37	20.24	6.24	0.00	0.01	100.00

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	113	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.90	0.02	19.51	6.03	7.83	0.49	21.10	4.69	0.00	0.01	100.57
T673	131	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	43.07	0.03	20.62	6.20	8.21	0.51	20.05	6.60	0.00	0.00	105.28
T673	118	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.61	0.06	18.98	6.31	6.90	0.42	20.36	5.82	0.00	0.00	99.45
T673	135	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.63	0.04	19.09	6.32	7.85	0.57	19.55	6.03	0.00	0.00	100.07
T673	137	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.28	0.07	18.60	6.59	7.42	0.47	20.06	5.97	0.04	0.01	99.51
T673	119	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.91	0.03	18.97	6.59	7.04	0.46	20.46	5.02	0.00	0.00	99.47
T673	103	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	42.01	0.12	18.79	6.61	7.38	0.35	20.51	5.93	0.02	0.00	101.71
T673	98	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.71	0.02	19.37	6.62	7.74	0.41	20.15	5.90	0.02	0.01	101.95
T673	124	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.89	0.01	18.86	6.70	7.03	0.40	20.03	6.04	0.00	0.00	99.96
T673	165	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.88	0.03	18.67	6.74	7.89	0.41	19.87	5.68	0.00	0.00	100.17
T673	94	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.97	0.01	19.23	6.75	7.31	0.47	23.39	1.69	0.00	0.02	99.84
T673	95	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.84	0.04	18.86	6.81	6.92	0.38	20.37	5.95	0.01	0.01	100.18
T673	114	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.31	0.06	18.53	6.81	7.45	0.49	19.60	5.91	0.02	0.01	99.20
T673	123	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.23	0.43	17.63	6.93	8.06	0.41	18.80	7.07	0.06	0.03	99.64
T673	144	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.26	0.37	17.80	6.98	7.88	0.39	18.51	7.11	0.03	0.00	99.32
T673	127	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.92	0.27	18.26	7.11	8.38	0.43	19.73	5.96	0.02	0.01	101.09
T673	163	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.16	0.44	17.84	7.15	7.55	0.33	20.21	5.91	0.04	0.00	99.61
T673	101	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.33	0.03	18.74	7.16	8.44	0.47	18.76	6.57	0.00	0.01	101.51
T673	108	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.99	0.07	18.61	7.25	7.62	0.56	19.77	5.98	0.00	0.03	100.89
T673	162	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	39.97	0.48	17.11	7.29	8.49	0.44	17.41	8.02	0.02	0.00	99.23
T673	106	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.09	0.32	18.05	7.33	7.14	0.38	20.50	6.00	0.00	0.00	100.81
T673	96	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.86	0.05	18.30	7.40	7.17	0.38	19.74	6.36	0.00	0.02	100.27
T673	110	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.78	0.10	18.14	7.40	8.29	0.59	18.67	6.48	0.03	0.03	100.51
T673	142	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.77	0.18	18.30	7.41	7.45	0.40	20.73	5.60	0.01	0.01	101.86
T673	140	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.40	0.27	17.45	7.45	7.50	0.40	19.63	6.34	0.01	0.03	99.48
T673	120	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.02	0.36	17.91	7.52	6.49	0.29	20.77	5.75	0.02	0.01	100.14
T673	99	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.05	0.30	18.06	7.53	7.35	0.47	20.00	5.85	0.04	0.01	100.65
T673	111	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.46	0.07	18.21	7.55	7.83	0.52	19.39	5.87	0.00	0.01	99.91
T673	97	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.99	0.20	17.92	7.75	6.99	0.39	20.60	5.78	0.03	0.02	100.66
T673	115	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.83	0.07	17.64	7.86	7.23	0.47	19.78	5.88	0.02	0.00	99.78
T673	102	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.62	0.02	17.83	7.89	7.19	0.43	19.53	6.88	0.00	0.00	100.39
T673	166	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.94	0.03	18.14	8.04	7.15	0.48	22.34	2.58	0.00	0.01	99.71
T673	104	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	41.34	0.32	17.56	8.17	7.29	0.40	20.23	6.06	0.00	0.00	101.37
T673	109	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.42	0.10	17.59	8.28	7.12	0.47	19.36	6.81	0.00	0.00	100.14
T673	126	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.63	0.19	16.97	8.61	7.53	0.36	19.84	6.58	0.04	0.00	100.74
T673	107	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.42	0.04	17.10	8.74	8.99	0.57	18.16	6.66	0.00	0.00	100.67
T673	164	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.35	0.12	16.97	8.76	6.46	0.38	20.30	6.08	0.02	0.00	99.43
T673	161	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	39.64	0.02	16.90	8.81	6.92	0.44	19.47	5.99	0.01	0.01	98.21
T673	112	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.37	0.13	16.83	9.01	7.15	0.40	19.55	6.46	0.00	0.01	99.91
T673	132	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.77	0.03	16.82	9.42	7.07	0.46	21.36	4.04	0.02	0.01	99.99

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	128	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.65	0.05	16.65	9.54	7.12	0.48	19.64	6.39	0.02	0.00	100.54
T673	100	94BCW3207	till	0.25-0.5	purple	Cr-pyrope	40.39	0.43	14.79	10.83	7.38	0.40	18.77	7.63	0.03	0.00	100.66
T712	31	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	42.09	0.14	20.35	3.76	7.88	0.41	21.60	4.46	0.02	0.01	100.70
T712	35	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	42.05	0.28	19.70	4.32	7.86	0.36	21.35	4.90	0.01	0.02	100.85
T712	26	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.74	0.20	19.54	4.65	7.75	0.35	21.00	5.03	0.00	0.02	100.29
T712	29	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	40.87	0.29	19.36	4.80	7.14	0.43	21.34	5.04	0.04	0.00	99.31
T712	23	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.50	0.08	19.63	5.27	7.11	0.43	21.11	5.08	0.00	0.01	100.22
T712	25	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	42.22	0.20	19.21	5.30	7.07	0.37	20.99	4.87	0.01	0.00	100.26
T712	28	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.18	0.30	19.03	5.47	7.52	0.48	20.78	4.99	0.02	0.00	99.77
T712	24	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.86	0.04	19.17	5.57	7.75	0.45	20.18	5.35	0.00	0.00	100.35
T712	21	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.25	0.00	19.31	5.58	7.30	0.37	20.01	5.74	0.00	0.00	99.57
T712	36	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.29	0.39	18.56	5.60	8.31	0.38	19.41	6.21	0.00	0.01	100.15
T712	27	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	40.67	0.00	18.19	7.03	7.92	0.59	18.94	6.07	0.00	0.00	99.41
T712	33	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.44	0.02	18.23	7.44	7.39	0.53	21.52	4.06	0.02	0.01	100.66
T712	34	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	40.84	0.00	16.90	8.82	8.13	0.58	18.18	6.80	0.01	0.01	100.28
T712	22	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	41.02	0.08	16.85	8.95	7.07	0.39	19.09	6.68	0.01	0.00	100.16
T712	30	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	40.47	0.00	16.51	9.08	7.13	0.40	19.15	6.79	0.00	0.00	99.53
T712	32	94BCW3207	till	0.5-0.84	purple	Cr-pyrope	40.72	0.14	16.44	9.36	6.65	0.41	20.96	4.96	0.00	0.01	99.64
T674	74	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.86	0.36	21.48	2.42	7.83	0.30	21.41	4.68	0.03	0.01	100.39
T674	46	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.76	0.18	21.24	2.88	7.79	0.35	21.30	4.86	0.04	0.00	100.39
T674	70	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.70	0.21	21.16	3.51	7.55	0.43	21.47	4.72	0.02	0.00	100.78
T674	73	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.49	0.37	20.61	3.63	7.93	0.41	21.05	5.21	0.01	0.01	100.72
T674	97	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.31	0.25	20.90	3.92	7.16	0.32	21.98	4.95	0.04	0.00	100.82
T674	102	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.52	0.08	21.25	3.93	7.81	0.44	20.99	4.90	0.00	0.00	100.91
T674	47	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.61	0.44	20.49	4.01	7.25	0.41	21.17	4.90	0.03	0.00	100.30
T674	41	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.33	0.31	20.51	4.31	8.02	0.49	20.95	4.76	0.07	0.01	100.76
T674	101	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.11	0.48	19.94	4.43	7.84	0.39	21.01	5.27	0.03	0.00	100.49
T674	83	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.92	0.28	20.12	4.50	7.68	0.39	20.83	4.76	0.04	0.01	99.53
T674	39	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.65	0.38	19.82	4.64	8.58	0.37	18.96	7.10	0.00	0.01	100.50
T674	45	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.99	0.39	19.44	4.69	8.69	0.40	18.62	7.13	0.00	0.01	100.36
T674	48	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.53	0.34	19.14	4.74	8.79	0.42	18.32	7.35	0.00	0.01	99.63
T674	55	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.23	0.39	19.84	4.76	8.04	0.39	20.22	6.10	0.04	0.00	101.01
T674	96	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.71	0.32	20.06	4.85	7.52	0.34	21.42	5.13	0.00	0.01	101.36
T674	107	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.51	0.35	19.60	4.87	8.00	0.35	20.05	6.08	0.02	0.00	100.84
T674	84	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.49	0.04	20.15	4.90	7.75	0.44	20.45	5.35	0.01	0.01	100.60
T674	60	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.24	0.42	19.51	4.97	8.23	0.42	19.62	6.38	0.01	0.00	100.78
T674	38	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.82	0.46	19.27	5.05	8.02	0.44	18.97	7.00	0.02	0.01	100.06
T674	44	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.55	0.36	19.37	5.08	8.28	0.39	19.38	6.46	0.02	0.00	100.89
T674	43	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.53	0.09	20.01	5.11	7.50	0.34	20.80	5.19	0.02	0.01	100.60
T674	93	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.98	0.45	19.01	5.17	7.58	0.37	20.44	5.46	0.00	0.02	99.47

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	99	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.75	0.15	19.53	5.26	7.32	0.36	20.92	5.12	0.03	0.00	99.43
T674	77	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.15	0.02	20.14	5.29	7.10	0.39	21.95	3.85	0.00	0.00	99.89
T674	61	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.16	0.15	19.36	5.33	7.80	0.43	20.74	5.48	0.03	0.00	100.48
T674	68	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.85	0.25	19.53	5.33	7.56	0.47	21.07	4.98	0.03	0.00	100.07
T674	50	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.24	0.25	19.22	5.42	7.67	0.35	19.94	6.09	0.01	0.01	100.19
T674	62	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.82	0.39	18.79	5.43	7.98	0.35	20.08	6.04	0.01	0.02	99.90
T674	87	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.35	0.08	19.53	5.47	7.52	0.38	20.95	4.69	0.00	0.01	99.97
T674	36	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.71	0.52	18.98	5.48	8.48	0.45	18.43	7.29	0.06	0.02	100.41
T674	89	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.76	0.24	19.88	5.49	7.22	0.43	21.31	4.99	0.05	0.01	101.38
T674	105	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.93	0.10	19.21	5.59	11.74	0.56	17.07	6.55	0.00	0.01	101.77
T674	80	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.92	0.00	19.76	5.65	8.01	0.53	20.15	5.09	0.00	0.01	100.11
T674	59	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.28	0.37	18.98	5.67	7.61	0.32	20.88	5.59	0.02	0.02	100.74
T674	58	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.10	0.00	19.63	5.69	8.47	0.49	19.13	6.08	0.00	0.01	100.60
T674	104	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.58	0.04	19.70	5.89	7.75	0.52	20.03	5.56	0.00	0.01	101.06
T674	35	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.49	0.51	18.78	5.90	8.29	0.39	18.86	7.31	0.05	0.01	100.58
T674	71	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.50	0.31	19.36	6.00	6.71	0.36	20.98	5.43	0.06	0.02	100.74
T674	88	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.87	0.01	19.86	6.08	7.21	0.42	22.65	2.89	0.00	0.01	100.99
T674	98	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.36	0.02	19.02	6.09	8.02	0.51	18.86	6.23	0.00	0.01	99.10
T674	95	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.36	0.37	18.43	6.13	8.42	0.40	18.63	6.90	0.00	0.00	100.64
T674	52	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.21	0.34	18.42	6.14	7.64	0.33	20.24	5.88	0.00	0.02	100.20
T674	79	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.27	0.05	19.47	6.22	7.48	0.50	20.03	5.17	0.00	0.02	100.23
T674	94	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	43.44	0.10	19.78	6.23	7.40	0.34	21.07	5.92	0.00	0.00	104.29
T674	69	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.76	0.12	18.95	6.24	8.51	0.54	19.83	5.27	0.05	0.00	100.25
T674	51	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.72	0.49	18.46	6.25	7.80	0.37	20.07	6.00	0.03	0.02	100.21
T674	76	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.93	0.03	19.79	6.26	7.46	0.57	22.90	2.20	0.00	0.01	101.14
T674	100	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.51	0.01	19.28	6.42	7.76	0.54	19.01	6.49	0.01	0.01	101.04
T674	85	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.33	0.00	19.22	6.45	7.31	0.39	20.12	6.12	0.00	0.01	100.95
T674	75	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.81	0.01	19.40	6.46	7.09	0.45	21.79	3.87	0.01	0.02	100.90
T674	65	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.65	0.17	18.34	6.55	7.63	0.36	19.71	6.34	0.00	0.02	99.77
T674	92	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.65	0.14	18.93	6.78	7.04	0.44	20.40	5.71	0.04	0.00	101.13
T674	40	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.93	0.25	18.00	6.87	7.43	0.38	20.10	6.08	0.01	0.00	100.06
T674	106	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.08	0.45	17.61	6.99	8.03	0.40	18.79	7.09	0.02	0.00	99.45
T674	34	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.11	0.40	18.27	7.08	7.05	0.36	20.09	5.97	0.00	0.00	100.34
T674	66	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.83	0.05	18.65	7.23	7.25	0.42	19.85	6.30	0.02	0.00	100.59
T674	42	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.38	0.69	17.13	7.33	8.98	0.50	18.37	6.76	0.06	0.02	100.21
T674	63	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.66	0.36	17.57	7.37	7.91	0.43	19.64	6.19	0.06	0.00	100.19
T674	78	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.97	0.01	18.99	7.37	7.46	0.49	22.52	2.25	0.00	0.00	101.06
T674	37	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.52	0.23	17.99	7.42	7.59	0.42	20.28	6.14	0.03	0.00	101.62
T674	64	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.51	0.00	18.17	7.46	7.85	0.48	18.65	6.75	0.02	0.01	99.90
T674	54	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.77	0.28	17.55	7.49	7.49	0.42	19.78	6.38	0.02	0.01	100.17

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	33	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.16	0.38	17.69	7.64	7.33	0.37	20.26	6.22	0.05	0.01	101.11
T674	82	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.18	0.03	18.29	7.66	7.03	0.40	21.13	4.62	0.01	0.00	100.34
T674	57	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.70	0.28	17.35	7.74	6.56	0.33	20.18	6.14	0.02	0.01	99.31
T674	53	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.21	0.09	18.23	7.82	7.23	0.45	19.35	6.57	0.01	0.00	100.95
T674	72	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.39	0.97	16.20	8.02	7.50	0.36	19.67	6.72	0.05	0.00	99.87
T674	81	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.96	0.03	18.23	8.25	7.20	0.49	22.07	3.29	0.02	0.01	100.55
T674	56	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.17	0.29	17.27	8.38	6.88	0.42	20.16	6.00	0.02	0.02	100.60
T674	125	94BCW3208	till	0.25-0.5	green	Cr-pyrope	40.10	0.56	16.63	8.47	7.84	0.44	19.28	6.26	0.06	0.01	99.65
T674	90	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	39.98	0.27	16.45	8.80	7.41	0.41	19.07	6.79	0.01	0.01	99.20
T674	49	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	41.01	0.01	17.13	9.12	6.76	0.42	20.45	5.47	0.02	0.00	100.39
T674	103	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.07	0.38	15.98	9.31	7.61	0.37	19.12	6.99	0.02	0.01	99.85
T674	86	94BCW3208	till	0.25-0.5	purple	Cr-pyrope	40.36	0.08	16.72	9.46	7.21	0.49	18.34	6.94	0.02	0.02	99.62
T712	67	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	42.66	0.16	20.78	3.07	7.94	0.41	21.14	4.24	0.03	0.02	100.45
T712	64	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	42.08	0.22	20.32	3.77	6.94	0.35	21.53	4.47	0.02	0.01	99.70
T712	65	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	41.48	0.29	19.25	4.87	7.18	0.38	20.91	5.01	0.01	0.02	99.40
T712	66	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	41.57	0.32	18.94	5.48	7.49	0.50	20.83	4.91	0.02	0.00	100.05
T712	69	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	41.11	0.13	18.74	5.53	7.31	0.44	20.38	5.44	0.00	0.00	99.10
T712	72	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	40.90	0.25	18.34	6.31	6.89	0.36	21.22	5.36	0.01	0.00	99.63
T712	70	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	40.92	0.41	17.35	7.24	7.19	0.33	20.41	5.73	0.04	0.01	99.62
T712	75	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	41.08	0.00	17.92	7.36	7.81	0.59	19.03	6.10	0.02	0.02	99.92
T712	74	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	41.22	0.40	17.07	7.53	6.97	0.37	19.91	6.01	0.00	0.01	99.49
T712	68	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	40.60	0.31	15.99	9.25	6.80	0.37	19.99	5.99	0.00	0.00	99.29
T712	71	94BCW3208	till	0.5-0.84	purple	Cr-pyrope	39.80	0.22	14.65	10.80	8.86	0.49	17.59	7.02	0.00	0.00	99.43
T675	41	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.29	0.05	21.81	2.65	7.93	0.38	21.49	4.53	0.02	0.00	100.15
T675	36	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.47	0.69	20.86	2.89	7.96	0.34	21.29	4.62	0.05	0.00	100.18
T675	26	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	42.30	0.38	20.83	3.48	6.61	0.32	21.71	4.83	0.02	0.00	100.47
T675	39	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.45	0.31	20.53	3.66	7.51	0.30	21.07	4.72	0.05	0.01	99.61
T675	28	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.12	0.22	20.56	3.85	7.62	0.39	20.99	4.65	0.05	0.02	99.49
T675	25	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.79	0.37	20.38	3.95	7.54	0.38	21.10	5.06	0.02	0.00	100.59
T675	24	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.12	0.42	19.90	4.43	7.90	0.36	19.96	6.04	0.04	0.01	100.16
T675	47	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.10	0.33	19.59	4.64	8.43	0.38	19.05	6.83	0.03	0.00	100.38
T675	23	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	20.34	4.64	6.88	0.41	21.20	5.10	0.03	0.00	100.55
T675	29	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.83	0.34	19.58	4.81	8.32	0.45	19.08	6.73	0.02	0.00	101.15
T675	22	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.30	0.20	19.70	4.83	8.77	0.36	19.38	5.53	0.01	0.01	100.08
T675	34	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.73	0.38	19.08	5.00	8.46	0.46	18.73	7.03	0.03	0.02	99.91
T675	3	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.12	0.16	19.66	5.24	9.00	0.57	18.55	6.25	0.01	0.01	100.58
T675	5	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.22	0.35	18.82	5.45	7.64	0.35	20.86	5.53	0.02	0.01	100.24
T675	31	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.80	0.17	19.39	5.66	7.36	0.39	20.71	5.26	0.00	0.01	99.73
T675	9	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.70	0.14	18.99	5.66	7.64	0.36	20.57	5.68	0.00	0.00	100.75
T675	44	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.02	0.40	18.80	5.68	7.21	0.39	20.46	5.48	0.04	0.03	99.51

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T675	15	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.08	0.04	19.47	6.08	7.24	0.54	20.53	5.17	0.02	0.00	100.17
T675	21	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.17	0.04	19.21	6.29	8.07	0.46	19.33	6.01	0.00	0.00	100.57
T675	7	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.50	0.03	19.47	6.43	7.14	0.43	21.46	4.31	0.00	0.00	100.75
T675	19	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.99	0.43	18.44	6.46	7.19	0.36	20.44	5.59	0.05	0.00	99.96
T675	45	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.86	0.26	18.55	6.53	7.45	0.43	20.51	5.32	0.03	0.01	99.95
T675	12	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.42	0.05	18.79	6.57	7.42	0.41	19.41	6.31	0.03	0.00	99.40
T675	33	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.51	0.40	18.33	6.63	7.02	0.38	20.25	5.87	0.04	0.01	100.42
T675	4	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.31	0.41	18.52	6.65	7.13	0.41	20.83	5.22	0.05	0.00	100.55
T675	18	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.36	0.03	18.56	6.66	7.43	0.48	19.59	6.08	0.01	0.01	99.20
T675	37	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.84	0.33	18.06	6.69	6.82	0.38	20.44	5.55	0.02	0.00	99.12
T675	38	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.32	0.20	18.48	6.79	7.10	0.38	20.17	5.96	0.01	0.01	100.44
T675	2	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.75	0.16	18.23	6.99	7.39	0.36	19.59	5.96	0.02	0.00	99.44
T675	32	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.59	0.00	18.57	7.04	8.14	0.54	19.14	5.76	0.03	0.01	99.81
T675	10	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.83	0.01	18.54	7.09	7.34	0.54	19.72	5.96	0.02	0.00	100.03
T675	30	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.48	0.29	17.92	7.16	6.88	0.39	20.56	5.85	0.01	0.02	100.55
T675	16	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.61	0.29	17.64	7.21	7.97	0.37	19.07	6.37	0.01	0.00	99.54
T675	14	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.69	0.35	17.89	7.31	7.14	0.35	20.38	5.80	0.03	0.00	99.93
T675	42	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.70	0.21	17.42	7.33	7.28	0.35	18.94	7.56	0.01	0.02	99.83
T675	8	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.82	0.29	17.58	7.36	7.24	0.37	19.98	6.07	0.03	0.00	99.74
T675	40	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.94	0.32	17.78	7.40	7.06	0.35	20.15	5.91	0.00	0.00	99.91
T675	43	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.91	0.22	17.68	7.54	7.40	0.37	19.87	6.09	0.03	0.01	100.12
T675	1	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.95	0.11	18.09	7.70	6.69	0.31	21.20	4.95	0.03	0.00	101.03
T675	17	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.91	0.09	17.59	8.20	6.73	0.41	20.04	6.04	0.01	0.01	100.04
T675	46	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.44	0.10	17.17	8.44	6.89	0.39	19.71	6.30	0.01	0.00	99.44
T675	35	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.47	0.06	17.08	8.55	7.58	0.52	18.79	6.76	0.01	0.01	99.81
T675	6	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.10	0.09	17.25	8.67	7.36	0.47	19.24	6.53	0.02	0.01	100.72
T675	27	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	41.02	0.30	16.45	9.24	6.85	0.43	19.89	6.39	0.01	0.00	100.58
T675	11	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.28	0.80	15.08	9.58	7.15	0.36	19.16	7.19	0.02	0.01	99.62
T675	13	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	39.97	0.94	15.13	9.68	8.51	0.39	17.52	7.74	0.07	0.00	99.94
T675	20	94BCW3209	till	0.25-0.5	purple	Cr-pyrope	40.06	0.06	15.66	10.24	8.02	0.55	17.39	7.85	0.00	0.01	99.84
T712	98	94BCW3209	till	0.5-0.84	purple	Cr-pyrope	40.19	0.20	15.71	9.28	8.70	0.49	18.36	6.49	0.01	0.00	99.42
T712	101	94BCW3209	till	0.5-0.84	orange	pyrope	41.41	0.94	21.06	0.51	8.95	0.31	21.63	4.30	0.06	0.00	99.16
T724	64	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.60	0.00	17.64	7.58	8.03	0.46	18.98	6.13	0.01	0.00	99.43
T724	65	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.98	0.06	17.57	7.52	8.09	0.55	17.94	7.31	0.00	0.00	99.01
T724	66	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.81	0.39	15.09	9.54	7.23	0.45	18.84	7.06	0.00	0.02	99.43
T724	67	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.17	0.04	16.86	8.27	7.92	0.58	18.93	6.52	0.01	0.00	99.29
T724	68	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.47	0.00	18.11	6.85	7.19	0.47	21.97	3.59	0.02	0.02	98.70
T724	69	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.61	0.06	17.62	7.88	7.63	0.51	21.98	3.03	0.00	0.00	99.30
T724	70	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.67	0.00	18.15	6.91	7.28	0.51	21.75	3.53	0.00	0.01	98.80
T724	71	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.64	0.06	16.93	8.49	7.17	0.41	19.22	7.02	0.02	0.00	99.97

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T724	72	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.61	0.00	20.40	4.13	7.65	0.40	21.30	4.23	0.00	0.00	99.72
T724	73	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.18	0.02	17.63	7.22	7.25	0.41	19.72	6.28	0.00	0.00	98.69
T724	74	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.35	0.05	15.94	9.86	7.19	0.46	18.93	7.12	0.00	0.00	99.91
T724	75	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.54	0.06	17.02	8.34	6.93	0.45	21.26	4.58	0.00	0.01	99.20
T724	76	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.80	0.03	17.58	7.65	8.19	0.49	18.92	6.22	0.00	0.01	99.90
T724	77	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.75	0.05	17.49	7.84	7.31	0.51	19.23	6.72	0.01	0.00	99.91
T724	78	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.62	0.11	17.69	7.16	7.05	0.48	20.17	5.92	0.02	0.01	99.22
T724	79	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.67	0.00	20.55	4.14	7.29	0.38	21.61	4.13	0.00	0.01	99.78
T724	80	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.89	0.37	18.35	6.31	7.81	0.46	20.41	5.36	0.04	0.02	99.99
T724	81	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.05	0.10	19.19	6.20	8.08	0.50	20.35	5.41	0.01	0.01	101.89
T724	82	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.38	0.00	16.11	9.54	7.04	0.47	18.81	7.19	0.00	0.00	99.54
T724	83	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.22	0.02	17.77	7.21	7.54	0.50	17.45	5.86	0.07	0.00	96.63
T724	84	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.17	0.55	17.51	6.28	8.13	0.49	18.94	6.93	0.06	0.02	99.08
T724	85	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.61	0.00	19.83	4.91	6.97	0.39	22.73	3.15	0.01	0.01	99.62
T724	86	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.38	0.07	18.88	5.74	7.52	0.43	20.24	5.96	0.00	0.00	99.23
T724	87	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.14	0.04	18.59	6.36	8.19	0.51	19.98	5.12	0.01	0.00	99.94
T724	88	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.34	0.00	19.27	5.62	7.52	0.57	23.03	1.65	0.02	0.02	99.03
T724	89	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.68	0.13	16.95	8.13	6.93	0.39	20.18	6.02	0.03	0.00	99.43
T724	90	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.06	0.43	18.17	5.20	8.94	0.44	18.38	7.18	0.00	0.00	98.80
T724	91	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.95	0.06	19.71	4.37	7.64	0.38	20.79	4.88	0.01	0.00	98.79
T724	92	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.48	0.71	18.18	5.25	8.03	0.43	20.06	5.44	0.08	0.01	98.65
T724	93	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.00	0.19	17.76	6.91	7.26	0.44	20.36	5.61	0.01	0.01	99.55
T724	94	94BCW3215	kimberlite	0.25-0.5	red-purple	Cr-Pyrope	40.91	0.63	18.78	4.55	8.46	0.40	19.97	5.73	0.00	0.00	99.43
T724	95	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.64	0.19	17.35	6.44	11.54	0.55	16.87	6.63	0.01	0.03	99.25
T724	96	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.65	0.05	17.40	7.85	7.51	0.51	19.41	6.14	0.02	0.01	99.55
T724	97	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.43	0.39	19.88	3.80	7.29	0.34	21.44	4.71	0.04	0.00	99.31
T724	98	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.98	0.36	17.85	6.63	7.14	0.44	20.85	5.53	0.04	0.01	99.82
T724	99	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.89	0.73	16.86	6.81	8.56	0.47	17.64	8.08	0.04	0.01	99.10
T724	100	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.36	0.00	16.81	8.46	6.95	0.41	19.26	6.85	0.00	0.01	99.11
T724	101	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.20	0.25	18.11	6.58	7.17	0.41	20.71	5.38	0.03	0.00	99.83
T724	102	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.47	0.30	17.99	6.22	7.75	0.44	20.45	5.53	0.02	0.01	99.17
T724	103	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.04	0.37	18.73	4.93	8.61	0.43	18.89	6.80	0.03	0.00	99.82
T724	104	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.66	0.07	16.25	9.45	7.24	0.47	19.68	6.14	0.03	0.00	100.00
T724	105	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.58	0.34	16.98	7.83	7.14	0.39	20.22	5.98	0.02	0.01	99.49
T724	106	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.39	0.36	21.32	2.41	7.88	0.37	21.52	4.39	0.05	0.00	100.69
T724	107	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.54	0.08	19.59	5.60	7.93	0.42	21.46	5.25	0.01	0.01	102.88
T724	108	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.79	0.32	17.52	6.77	7.20	0.41	20.16	5.78	0.01	0.01	98.95
T724	109	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.94	0.41	18.30	5.57	8.59	0.43	18.82	7.05	0.03	0.00	100.12
T724	110	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.19	0.03	17.78	7.71	7.54	0.49	19.47	6.32	0.03	0.00	100.55
T724	111	94BCW3215	kimberlite	0.25-0.5	red-purple	Cr-Pyrope	42.12	0.39	20.70	2.29	7.89	0.31	21.49	4.49	0.02	0.01	99.72

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T724	112	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.37	0.88	12.99	7.26	7.33	0.32	23.30	7.93	0.00	0.00	99.37
T724	113	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.00	0.56	15.21	9.83	7.23	0.42	19.29	6.64	0.07	0.01	99.27
T724	114	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.44	0.05	16.52	8.64	8.15	0.45	19.37	5.94	0.00	0.00	99.55
T724	115	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.12	0.35	18.13	5.33	8.10	0.44	19.04	6.82	0.03	0.01	98.35
T724	116	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.09	0.03	19.85	3.89	8.03	0.38	20.74	5.21	0.00	0.01	99.21
T724	117	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.96	0.02	18.24	6.66	7.25	0.44	22.16	3.52	0.00	0.01	99.26
T724	118	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.49	0.21	14.73	10.25	7.07	0.40	19.08	7.08	0.00	0.02	98.33
T724	119	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.37	18.82	5.24	7.59	0.32	20.66	5.39	0.03	0.01	99.69
T724	120	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.90	0.31	17.58	6.85	7.15	0.43	20.66	5.63	0.01	0.01	99.52
T724	121	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.27	0.05	16.16	9.24	7.34	0.46	18.88	7.07	0.01	0.00	99.48
T724	122	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.42	0.00	16.78	8.66	6.95	0.40	19.23	7.01	0.02	0.00	99.47
T724	123	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.85	0.32	16.70	8.53	7.15	0.39	20.02	6.22	0.00	0.00	100.17
T724	124	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.82	0.00	18.37	6.77	7.53	0.50	20.17	5.53	0.02	0.00	99.70
T724	125	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.31	19.53	4.28	7.75	0.41	20.89	5.26	0.01	0.00	99.70
T724	126	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.65	0.12	18.75	6.07	7.36	0.39	20.44	5.60	0.00	0.01	99.41
T724	127	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.72	0.36	19.85	3.88	7.35	0.37	21.42	5.01	0.03	0.00	100.00
T724	128	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.77	0.27	19.94	3.89	7.51	0.39	21.49	4.74	0.01	0.02	100.03
T724	129	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.69	0.36	18.64	5.17	8.55	0.44	18.88	6.88	0.00	0.00	99.63
T724	130	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.74	0.00	18.20	7.56	6.99	0.37	22.61	2.94	0.00	0.01	100.43
T724	131	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.86	0.19	16.50	8.05	7.73	0.39	19.77	6.47	0.04	0.01	100.00
T724	132	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.22	0.28	17.85	6.88	6.60	0.42	20.94	5.68	0.02	0.01	99.89
T724	133	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.91	0.21	15.05	10.48	7.29	0.51	19.45	6.56	0.03	0.02	99.51
T724	134	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.27	19.59	4.41	7.66	0.32	21.06	4.90	0.02	0.01	99.50
T724	135	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.01	0.00	18.50	6.54	7.74	0.50	22.81	1.87	0.01	0.00	98.98
T724	136	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.50	0.06	20.91	3.55	7.95	0.44	21.05	4.87	0.00	0.00	100.32
T724	137	94BCW3215	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.02	0.40	17.26	7.38	7.52	0.37	19.88	6.12	0.02	0.01	99.98
T725	42	94BCW3215	kimberlite	0.25-0.5	red	Cr-Pyrope	41.77	0.32	20.76	3.02	7.90	0.31	21.53	4.79	0.02	0.00	100.40
T725	63	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.82	0.02	16.70	8.89	6.98	0.45	20.23	5.70	0.00	0.03	99.81
T725	64	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.22	0.00	16.08	9.59	7.11	0.45	19.10	7.07	0.00	0.01	99.62
T725	65	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.09	0.00	16.53	9.53	7.07	0.45	18.78	7.07	0.01	0.02	100.54
T725	66	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.19	18.64	6.14	7.18	0.37	21.12	5.16	0.02	0.00	100.21
T725	67	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.00	19.09	5.66	7.38	0.40	20.64	5.60	0.00	0.01	99.89
T725	68	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.04	0.00	17.19	8.32	7.07	0.43	21.42	4.58	0.02	0.02	100.08
T725	69	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.12	0.18	16.63	8.76	6.98	0.43	19.90	6.31	0.00	0.01	100.32
T725	70	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.21	0.12	17.41	7.92	7.11	0.37	20.39	6.15	0.03	0.00	100.70
T725	71	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.35	0.00	18.13	7.39	8.16	0.46	19.37	6.06	0.02	0.01	100.95
T725	72	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.83	0.00	18.88	6.24	8.65	0.57	18.69	6.52	0.00	0.01	100.39
T725	73	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.20	0.00	19.28	5.01	7.38	0.43	19.85	5.31	0.00	0.01	98.45
T725	74	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.12	0.00	17.44	8.21	7.35	0.48	19.30	6.81	0.01	0.00	100.71
T725	75	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.22	0.00	18.67	6.70	7.15	0.47	22.27	3.56	0.00	0.00	100.03

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T725	76	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.60	0.34	19.34	4.61	7.94	0.40	20.23	6.12	0.02	0.01	100.60
T725	77	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.88	0.00	19.18	5.18	7.71	0.37	20.65	5.55	0.00	0.01	99.52
T725	78	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.97	0.00	17.57	7.87	7.42	0.49	19.44	6.37	0.00	0.00	100.14
T725	79	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.89	0.06	16.67	9.05	7.09	0.47	19.26	6.81	0.00	0.00	100.32
T725	80	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.17	0.03	20.28	4.83	7.08	0.39	23.87	2.02	0.00	0.03	100.70
T725	81	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.54	0.05	18.66	6.77	7.24	0.44	22.89	2.60	0.00	0.01	100.20
T725	82	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.74	0.07	16.09	9.55	7.22	0.39	18.86	7.22	0.01	0.01	100.15
T725	83	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.36	0.06	17.90	7.10	7.49	0.43	19.65	6.22	0.01	0.00	100.23
T725	84	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.25	0.06	19.06	5.79	7.80	0.42	20.27	5.65	0.00	0.02	100.33
T725	85	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.44	0.02	17.79	7.27	7.78	0.52	19.04	6.56	0.01	0.02	99.47
T725	86	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.45	0.00	20.01	4.95	8.07	0.54	22.56	2.21	0.01	0.00	99.80
T725	87	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.65	0.07	18.55	6.70	7.80	0.54	20.41	5.56	0.01	0.01	100.29
T725	88	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.21	0.00	18.45	6.89	7.47	0.40	20.03	6.32	0.01	0.00	100.78
T725	89	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.58	0.03	16.26	9.43	6.93	0.44	19.01	7.08	0.02	0.01	99.80
T725	90	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.10	19.15	5.66	7.49	0.41	20.54	5.68	0.00	0.00	100.41
T725	91	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.16	0.01	17.68	8.09	7.71	0.56	20.52	5.01	0.03	0.00	100.74
T725	92	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.01	0.01	17.91	7.38	7.68	0.43	19.93	5.65	0.01	0.00	100.01
T725	93	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.09	0.02	17.20	8.43	7.12	0.46	19.51	6.83	0.02	0.00	100.68
T725	94	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.74	0.02	19.90	4.91	7.06	0.35	23.57	1.99	0.02	0.01	99.56
T726	1	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.20	0.21	16.93	8.10	7.38	0.47	19.75	6.13	0.00	0.01	100.18
T726	2	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.55	0.45	13.25	9.35	6.90	0.36	13.84	5.68	0.04	0.03	91.44
T726	3	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.08	0.27	21.02	2.93	8.42	0.45	21.07	4.54	0.06	0.00	100.85
T726	4	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.11	0.33	17.54	7.09	7.06	0.39	20.62	5.88	0.01	0.00	100.03
T726	5	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.19	0.33	20.50	3.50	7.81	0.41	21.31	4.60	0.02	0.00	100.66
T726	6	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.27	0.00	20.07	5.17	6.99	0.41	23.12	2.58	0.00	0.00	100.61
T726	7	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.47	0.25	18.56	6.25	7.47	0.45	20.44	5.30	0.01	0.01	100.21
T726	8	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.29	0.16	21.54	2.11	8.45	0.39	21.31	4.44	0.00	0.02	100.70
T726	9	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.18	0.35	17.44	7.36	7.23	0.35	20.15	6.10	0.01	0.02	100.18
T726	10	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.07	0.34	18.79	5.58	7.03	0.38	21.02	5.40	0.02	0.01	100.64
T726	11	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.06	0.21	17.13	8.11	6.92	0.39	20.16	6.15	0.00	0.01	100.12
T726	12	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.56	0.44	18.78	4.81	8.66	0.40	18.59	6.91	0.03	0.01	99.17
T726	13	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.61	0.06	17.38	7.41	7.32	0.38	20.24	5.83	0.02	0.00	99.25
T726	14	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.25	17.87	6.57	7.49	0.37	20.57	5.86	0.03	0.00	100.09
T726	15	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.64	0.29	20.14	3.85	7.59	0.38	21.82	4.81	0.00	0.00	100.53
T726	16	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.43	0.50	19.37	4.48	8.30	0.39	20.15	6.03	0.02	0.03	100.69
T726	17	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.24	0.26	18.24	6.33	7.38	0.39	20.88	5.52	0.03	0.00	100.26
T726	18	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.70	0.05	18.09	7.28	7.95	0.51	19.16	6.06	0.00	0.00	99.78
T726	19	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.03	0.34	18.07	6.95	7.05	0.35	20.68	5.70	0.02	0.00	100.19
T726	20	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.08	0.20	21.19	3.00	7.51	0.39	21.78	4.61	0.05	0.00	100.80
T726	21	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.85	0.06	19.03	5.29	7.56	0.36	21.17	5.43	0.00	0.00	100.74

Appendix C.2 Probe data for pyrope grains from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T726	22	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.14	0.29	18.40	5.53	8.80	0.44	18.50	7.46	0.02	0.00	100.58
T726	24	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.01	0.22	21.19	2.53	8.53	0.48	21.34	4.43	0.05	0.00	100.78
T726	25	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.12	0.39	20.68	2.27	8.00	0.34	21.15	4.68	0.01	0.01	99.64
T726	26	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.52	0.33	19.12	5.20	7.73	0.30	20.84	5.36	0.04	0.00	100.44
T726	27	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.77	0.05	16.32	9.76	6.89	0.37	20.41	5.43	0.00	0.01	100.00
T726	28	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.70	0.42	16.63	8.43	7.28	0.35	19.97	6.02	0.07	0.01	99.89
T726	29	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.00	18.03	6.98	7.56	0.49	20.72	4.75	0.04	0.01	99.67
T726	30	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	39.99	0.28	16.00	9.28	8.16	0.51	19.18	5.71	0.06	0.01	99.19
T726	31	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.77	0.28	17.20	7.76	7.24	0.44	20.15	5.74	0.04	0.02	99.62
T726	32	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.48	0.46	17.67	6.92	8.34	0.42	19.14	6.37	0.02	0.00	99.82
T726	33	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.33	18.37	5.91	7.72	0.37	20.82	5.46	0.04	0.01	100.43
T726	34	94BCW3215	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.92	0.43	18.74	4.95	8.60	0.39	19.26	6.88	0.03	0.00	100.20
T727	1	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.84	0.25	18.05	6.86	7.28	0.37	20.91	5.60	0.04	0.00	101.20
T727	2	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.11	0.04	17.34	7.90	7.10	0.42	19.60	6.69	0.01	0.01	100.22
T727	3	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.22	0.39	17.35	7.56	7.39	0.35	20.26	5.91	0.03	0.01	100.46
T727	4	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.04	0.03	19.38	6.14	7.39	0.46	23.59	1.91	0.00	0.01	100.95
T727	5	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.86	0.13	18.13	7.17	6.95	0.38	20.81	5.87	0.04	0.01	101.34
T727	6	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.66	0.17	17.17	7.93	7.03	0.43	20.44	6.04	0.02	0.00	100.89
T727	7	94BCW3215	kimberlite	0.84-2.0	pink	Cr-Pyrope	42.27	0.25	21.07	2.86	8.41	0.42	21.31	4.49	0.06	0.02	101.16
T727	8	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.74	0.02	19.50	5.82	6.47	0.39	23.46	2.57	0.04	0.00	100.00
T727	9	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.71	0.30	20.12	3.84	7.62	0.36	21.52	4.87	0.02	0.01	101.37
T727	10	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	40.71	0.11	15.48	10.51	7.13	0.47	19.20	6.89	0.00	0.00	100.49
T727	11	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.16	0.08	19.25	4.98	7.47	0.31	20.98	5.56	0.02	0.00	100.79
T727	12	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.19	0.13	17.63	7.68	7.18	0.36	20.68	5.85	0.00	0.00	100.71
T727	13	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.95	0.26	20.54	3.50	7.74	0.36	21.64	4.50	0.02	0.01	100.51
T727	14	94BCW3215	kimberlite	0.84-2.0	red	Cr-Pyrope	41.44	0.43	19.53	4.04	10.23	0.50	19.66	4.89	0.07	0.01	100.80
T727	15	94BCW3215	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.32	0.31	17.99	7.01	7.01	0.36	20.97	5.59	0.05	0.00	100.61
T725	36	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	42.08	0.58	20.93	1.38	9.39	0.34	21.07	4.65	0.01	0.02	100.44
T725	37	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	41.42	0.85	21.17	0.22	10.33	0.28	20.49	4.28	0.01	0.02	99.06
T725	38	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	42.34	0.42	21.60	1.32	7.84	0.43	22.19	4.58	0.02	0.00	100.72
T725	39	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	41.88	0.87	21.28	0.23	10.48	0.27	20.78	4.31	0.04	0.01	100.14
T725	40	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	42.60	0.86	21.78	0.22	10.41	0.35	21.21	4.20	0.07	0.01	101.72
T725	41	94BCW3215	kimberlite	0.25-0.5	orange-red	Pyrope	41.86	0.71	21.53	0.36	9.32	0.27	21.85	4.19	0.04	0.01	100.13
T726	23	94BCW3215	kimberlite	0.5-0.84	red	Pyrope	43.08	0.23	22.44	1.00	7.81	0.38	21.93	4.48	0.03	0.00	101.38

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	24	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.12	0.11	1.41	1.09	2.80	0.11	18.86	20.53	1.08	0.06	101.16
T663	23	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.42	0.25	1.38	1.11	2.61	0.11	17.84	21.55	1.14	0.04	101.46
T663	18	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.14	0.18	1.65	1.16	2.64	0.09	18.02	20.92	1.25	0.06	101.11
T663	20	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.40	0.09	1.30	1.16	2.49	0.09	18.08	21.69	1.01	0.04	101.35
T663	21	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.27	0.16	1.62	1.26	2.52	0.10	17.97	20.74	1.28	0.05	100.96
T663	17	94BCW3101	till	0.25-0.5	green	Cr-Diopside	55.11	0.18	0.98	1.35	2.37	0.11	17.62	22.60	1.06	0.05	101.42
T704	73	94BCW3101	till	0.5-0.84	green	Cr-Diopside	53.51	0.13	1.62	1.19	2.75	0.16	17.67	20.41	1.24	0.06	98.73
T663	22	94BCW3101	till	0.25-0.5	green	HiCr-Diopside	55.25	0.18	1.40	1.52	2.18	0.09	17.61	21.54	1.18	0.04	100.99
T663	19	94BCW3101	till	0.25-0.5	green	HiCr-Diopside	54.75	0.23	1.35	1.53	2.41	0.04	17.76	21.66	1.14	0.05	100.91
T704	72	94BCW3101	till	0.5-0.84	green	HiCr-Diopside	54.52	0.19	1.65	1.66	2.55	0.11	17.75	20.49	1.43	0.02	100.37
T663	118	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.56	0.16	0.66	0.53	2.83	0.10	17.82	23.30	0.71	0.03	100.71
T663	147	94BCW3102	till	0.25-0.5	green	Cr-Diopside	52.88	0.14	1.59	0.65	4.07	0.10	16.40	23.70	0.36	0.01	99.89
T663	148	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.54	0.26	1.51	0.77	2.86	0.07	17.50	21.19	1.34	0.07	100.11
T663	93	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.73	0.11	1.22	1.04	2.71	0.09	18.43	20.96	0.96	0.06	100.32
T663	107	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.69	0.10	1.29	1.05	2.49	0.12	18.25	21.05	1.03	0.08	100.15
T663	138	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.45	0.11	1.25	1.06	2.62	0.07	18.21	21.09	0.99	0.06	99.91
T663	149	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.48	0.12	1.30	1.07	2.57	0.15	18.15	21.34	0.99	0.03	100.19
T663	124	94BCW3102	till	0.25-0.5	green	Cr-Diopside	55.03	0.07	1.20	1.07	2.71	0.09	18.51	21.14	0.95	0.06	100.85
T663	122	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.43	0.10	1.42	1.10	2.47	0.09	18.07	21.30	1.04	0.06	100.07
T663	95	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.88	0.10	1.39	1.11	2.54	0.11	18.04	21.65	1.02	0.04	100.86
T663	128	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.86	0.17	1.67	1.11	2.90	0.11	18.30	20.17	1.32	0.04	100.64
T663	137	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.08	0.10	1.29	1.11	2.59	0.14	17.79	21.36	0.99	0.03	99.48
T663	100	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.71	0.12	1.40	1.13	2.56	0.16	18.11	21.38	1.08	0.06	100.71
T663	130	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.60	0.11	1.36	1.13	2.54	0.09	17.76	21.52	1.02	0.04	100.18
T663	109	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.94	0.12	1.50	1.15	2.60	0.11	17.84	21.26	1.05	0.04	100.61
T663	111	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.60	0.17	1.40	1.16	2.64	0.16	18.12	20.89	1.14	0.08	100.35
T663	112	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.31	0.10	1.45	1.16	2.62	0.03	17.78	21.65	1.13	0.06	100.30
T663	140	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.33	0.19	1.68	1.17	2.81	0.07	18.47	19.91	1.32	0.03	99.98
T663	126	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.99	0.20	1.73	1.23	2.51	0.09	17.83	20.84	1.33	0.03	100.77
T663	142	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.27	0.14	1.68	1.24	2.47	0.07	17.80	20.55	1.28	0.03	99.54
T663	104	94BCW3102	till	0.25-0.5	green	Cr-Diopside	55.19	0.22	0.88	1.27	2.42	0.11	17.57	22.10	1.05	0.02	100.83
T663	114	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.56	0.20	1.21	1.30	2.32	0.11	17.49	21.60	1.19	0.05	100.03
T663	121	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.68	0.19	1.69	1.31	2.52	0.10	17.54	20.80	1.29	0.04	100.16
T663	125	94BCW3102	till	0.25-0.5	green	Cr-Diopside	55.31	0.20	1.72	1.31	2.56	0.05	17.90	20.71	1.42	0.05	101.24
T663	123	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.72	0.20	1.70	1.32	2.65	0.10	17.90	20.94	1.33	0.03	100.88
T663	129	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.91	0.16	1.67	1.32	2.60	0.10	17.87	20.87	1.35	0.04	100.89
T663	150	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.46	0.21	1.71	1.32	2.46	0.07	17.67	21.02	1.31	0.07	100.31
T663	131	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.32	0.20	1.35	1.32	2.46	0.10	17.43	21.74	1.07	0.08	100.09
T663	96	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.79	0.17	1.73	1.33	2.57	0.08	17.80	20.79	1.38	0.03	100.67
T663	139	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.16	0.14	1.66	1.36	2.58	0.11	17.56	21.15	1.35	0.04	100.10

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	102	94BCW3102	till	0.25-0.5	green	Cr-Diopside	55.06	0.17	0.91	1.36	2.63	0.13	17.30	22.19	1.08	0.01	100.83
T663	141	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.51	0.22	1.31	1.37	2.49	0.11	17.25	21.56	1.15	0.06	100.02
T663	101	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.80	0.16	2.30	1.41	2.77	0.12	17.23	19.57	1.90	0.04	100.29
T663	106	94BCW3102	till	0.25-0.5	green	Cr-Diopside	55.05	0.32	1.72	1.42	2.60	0.12	17.52	20.39	1.64	0.03	100.81
T663	133	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.10	0.17	1.68	1.45	2.31	0.12	17.46	20.78	1.32	0.05	99.45
T663	120	94BCW3102	till	0.25-0.5	green	Cr-Diopside	54.28	0.20	0.92	1.48	2.39	0.16	17.49	22.59	1.11	0.02	100.65
T704	91	94BCW3102	till	0.5-0.84	green	Cr-Diopside	55.11	0.16	1.33	0.92	2.94	0.08	17.59	20.91	1.18	0.06	100.27
T704	85	94BCW3102	till	0.5-0.84	green	Cr-Diopside	53.69	0.18	1.32	0.98	2.53	0.09	17.64	21.18	1.31	0.02	98.96
T704	87	94BCW3102	till	0.5-0.84	green	Cr-Diopside	53.72	0.27	1.38	1.01	2.76	0.09	17.72	21.20	1.04	0.04	99.23
T704	83	94BCW3102	till	0.5-0.84	green	Cr-Diopside	53.35	0.00	1.22	1.03	2.78	0.12	18.72	20.89	0.97	0.06	99.12
T704	93	94BCW3102	till	0.5-0.84	green	Cr-Diopside	55.24	0.01	1.33	1.07	2.67	0.10	18.04	21.35	1.07	0.05	100.94
T704	86	94BCW3102	till	0.5-0.84	green	Cr-Diopside	54.33	0.04	1.27	1.11	2.72	0.11	18.77	20.68	1.06	0.06	100.16
T704	94	94BCW3102	till	0.5-0.84	green	Cr-Diopside	54.88	0.08	1.28	1.12	2.73	0.12	18.03	20.96	1.02	0.08	100.28
T704	88	94BCW3102	till	0.5-0.84	green	Cr-Diopside	53.84	0.35	1.37	1.17	2.33	0.13	18.00	21.12	1.13	0.05	99.47
T704	89	94BCW3102	till	0.5-0.84	green	Cr-Diopside	54.67	0.16	1.55	1.22	2.68	0.11	17.98	20.29	1.33	0.06	100.05
T704	82	94BCW3102	till	0.5-0.84	green	Cr-Diopside	53.59	0.18	0.93	1.36	2.45	0.09	17.45	22.01	1.09	0.04	99.18
T704	95	94BCW3102	till	0.5-0.84	green	Cr-Diopside	54.25	0.10	1.63	1.38	2.66	0.13	18.58	19.66	1.40	0.07	99.85
T704	92	94BCW3102	till	0.5-0.84	green	Cr-Diopside	54.27	0.23	1.60	1.48	2.70	0.09	17.34	20.61	1.41	0.05	99.78
T663	143	94BCW3102	till	0.25-0.5	green	Diopside	53.76	0.02	0.88	0.18	4.32	0.21	17.30	23.19	0.36	0.00	100.22
T663	108	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.32	0.05	1.34	1.55	2.68	0.09	17.95	20.72	1.16	0.07	99.93
T663	119	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.27	0.06	1.27	1.56	2.54	0.08	18.44	20.56	1.10	0.08	99.94
T663	152	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.47	0.24	1.27	1.62	2.38	0.06	17.44	21.36	1.42	0.03	100.29
T663	98	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.89	0.20	1.64	1.64	2.55	0.10	17.39	20.70	1.60	0.05	100.77
T663	136	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	55.22	0.18	0.80	1.67	1.86	0.07	17.83	22.23	1.13	0.04	101.04
T663	97	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.93	0.21	1.36	1.78	2.51	0.09	17.18	21.16	1.46	0.01	100.70
T663	105	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.74	0.20	0.57	1.80	1.67	0.04	17.44	22.94	1.01	0.05	100.44
T663	151	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.86	0.24	1.22	1.81	2.20	0.06	17.12	21.67	1.35	0.03	100.57
T663	146	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.44	0.20	0.74	1.86	2.17	0.13	17.23	22.16	1.08	0.04	100.03
T663	94	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.77	0.24	1.27	1.91	2.46	0.13	17.15	21.13	1.52	0.03	100.61
T663	110	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	53.84	0.20	1.30	1.95	2.45	0.06	17.11	21.21	1.32	0.05	99.49
T663	127	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.76	0.21	1.32	2.05	2.25	0.09	17.44	21.29	1.39	0.04	100.83
T663	99	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	55.02	0.21	0.96	2.15	2.12	0.13	17.47	21.77	1.27	0.04	101.13
T663	117	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.77	0.20	1.44	2.16	2.37	0.12	16.88	20.44	1.64	0.03	100.04
T663	115	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.99	0.25	1.42	2.18	2.33	0.08	16.90	20.77	1.65	0.03	100.61
T663	134	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.28	0.20	1.39	2.18	2.46	0.09	16.87	20.71	1.71	0.05	99.94
T663	145	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.94	0.20	1.05	2.57	2.62	0.09	17.47	19.96	1.65	0.06	100.60
T663	132	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.26	0.22	1.92	2.64	2.56	0.15	16.68	18.75	2.14	0.04	99.33
T663	135	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.34	0.12	1.30	2.99	2.06	0.05	16.31	21.24	1.65	0.06	100.10
T663	113	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.20	0.19	1.74	3.09	2.53	0.14	16.41	19.84	1.94	0.06	100.13
T663	116	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.89	0.09	1.86	3.25	2.12	0.07	16.45	19.07	2.26	0.01	100.06

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	103	94BCW3102	till	0.25-0.5	green	HiCr-Diopside	54.81	0.24	1.40	3.36	2.21	0.16	16.80	19.46	2.08	0.03	100.55
T704	84	94BCW3102	till	0.5-0.84	green	HiCr-Diopside	54.89	0.24	1.70	1.69	2.79	0.15	17.08	19.69	1.77	0.02	100.02
T704	90	94BCW3102	till	0.5-0.84	green	HiCr-Diopside	54.26	0.33	1.36	2.09	2.45	0.09	17.22	20.52	1.71	0.03	100.06
T664	34	94BCW3103	till	0.25-0.5	green	Cr-Diopside	53.64	0.09	1.60	0.64	7.32	0.26	16.92	20.39	0.58	0.00	101.44
T664	28	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.75	0.20	1.50	0.96	2.93	0.10	18.36	20.57	1.25	0.07	100.69
T664	39	94BCW3103	till	0.25-0.5	green	Cr-Diopside	53.16	0.06	1.75	1.00	4.95	0.17	16.69	22.03	0.70	0.01	100.52
T664	35	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.20	0.12	1.42	1.01	2.70	0.10	18.62	20.83	1.14	0.06	100.19
T664	31	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.63	0.09	1.29	1.11	2.68	0.13	18.09	21.46	1.14	0.04	100.66
T664	38	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.14	0.14	1.52	1.16	2.67	0.14	18.22	21.03	1.27	0.04	100.33
T664	33	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.58	0.21	1.37	1.17	2.47	0.09	17.46	22.15	1.25	0.03	100.78
T664	30	94BCW3103	till	0.25-0.5	green	Cr-Diopside	53.85	0.18	1.75	1.26	2.51	0.12	17.56	21.02	1.45	0.03	99.72
T664	40	94BCW3103	till	0.25-0.5	green	Cr-Diopside	53.74	0.19	1.71	1.30	2.67	0.09	18.23	20.18	1.47	0.03	99.62
T664	37	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.14	0.15	1.62	1.35	2.55	0.12	17.86	20.85	1.45	0.07	100.16
T664	32	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.42	0.23	1.35	1.35	2.31	0.08	17.92	21.69	1.27	0.05	100.66
T664	27	94BCW3103	till	0.25-0.5	green	Cr-Diopside	54.60	0.17	1.70	1.38	2.63	0.09	18.11	20.89	1.49	0.05	101.11
T664	24	94BCW3103	till	0.25-0.5	green	Cr-Diopside	55.25	0.23	1.17	1.39	2.25	0.08	17.71	22.11	1.27	0.05	101.50
T705	12	94BCW3103	till	0.5-0.84	green	Cr-Diopside	53.68	0.24	1.29	0.88	2.83	0.07	18.17	21.09	1.03	0.07	99.33
T705	15	94BCW3103	till	0.5-0.84	green	Cr-Diopside	54.28	0.14	1.24	1.16	2.66	0.15	18.39	21.06	1.02	0.07	100.17
T705	7	94BCW3103	till	0.5-0.84	green	Cr-Diopside	53.17	0.20	1.59	1.26	2.64	0.14	18.14	20.23	1.30	0.05	98.73
T705	8	94BCW3103	till	0.5-0.84	green	Cr-Diopside	54.37	0.21	1.62	1.41	2.70	0.07	17.31	20.79	1.39	0.06	99.92
T705	6	94BCW3103	till	0.5-0.84	green	Cr-Diopside	55.12	0.16	1.69	1.41	2.61	0.12	17.93	20.40	1.42	0.05	100.90
T705	14	94BCW3103	till	0.5-0.84	green	Cr-Diopside	54.37	0.06	1.60	1.45	2.61	0.10	17.94	21.08	1.21	0.05	100.48
T664	29	94BCW3103	till	0.25-0.5	green	HiCr-Diopside	55.09	0.11	0.36	1.72	1.41	0.04	17.94	23.67	0.97	0.04	101.34
T664	36	94BCW3103	till	0.25-0.5	green	HiCr-Diopside	53.82	0.30	1.38	1.91	2.44	0.10	17.17	21.22	1.67	0.05	100.06
T664	26	94BCW3103	till	0.25-0.5	green	HiCr-Diopside	55.22	0.12	0.26	1.98	1.76	0.10	17.81	22.83	1.24	0.01	101.33
T664	25	94BCW3103	till	0.25-0.5	green	HiCr-Diopside	55.35	0.28	2.35	2.37	2.74	0.11	17.22	18.87	2.42	0.05	101.77
T705	13	94BCW3103	till	0.5-0.84	green	HiCr-Diopside	54.12	0.07	1.65	1.56	2.57	0.08	17.50	21.04	1.44	0.04	100.05
T705	10	94BCW3103	till	0.5-0.84	green	HiCr-Diopside	54.31	0.29	1.33	1.93	2.50	0.11	17.20	20.36	1.58	0.03	99.64
T705	11	94BCW3103	till	0.5-0.84	green	HiCr-Diopside	53.60	0.00	1.30	2.04	2.15	0.11	17.99	20.72	1.44	0.00	99.34
T705	9	94BCW3103	till	0.5-0.84	green	HiCr-Diopside	54.46	0.02	0.73	3.28	1.98	0.09	16.87	20.45	1.77	0.03	99.67
T664	67	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.28	0.14	1.43	0.98	2.61	0.08	18.05	21.51	1.16	0.05	100.27
T664	78	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.78	0.11	1.32	1.07	2.66	0.06	18.48	21.88	1.10	0.06	101.52
T664	70	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.85	0.20	1.73	1.09	2.82	0.08	18.59	20.19	1.46	0.06	101.05
T664	66	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.39	0.10	1.30	1.12	2.61	0.13	18.73	21.07	1.11	0.05	100.61
T664	75	94BCW3104	till	0.25-0.5	green	Cr-Diopside	55.03	0.13	1.48	1.15	2.66	0.08	18.36	21.48	1.23	0.07	101.66
T664	63	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.13	0.20	1.56	1.17	2.45	0.11	17.65	21.28	1.41	0.03	99.99
T664	74	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.62	0.07	1.31	1.22	2.63	0.07	18.48	21.25	1.22	0.08	100.94
T664	71	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.63	0.19	1.70	1.23	2.51	0.12	18.00	20.92	1.46	0.04	100.80
T664	65	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.27	0.17	1.67	1.25	2.56	0.06	17.97	20.92	1.43	0.06	100.36
T664	73	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.41	0.17	1.77	1.32	2.74	0.14	18.36	20.21	1.61	0.04	100.77

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	77	94BCW3104	till	0.25-0.5	green	Cr-Diopside	54.74	0.10	0.33	1.33	1.79	0.05	17.73	23.87	0.96	0.02	100.93
T705	35	94BCW3104	till	0.5-0.84	green	Cr-Diopside	54.11	0.03	0.90	0.54	3.50	0.13	17.99	21.59	0.76	0.03	99.58
T705	31	94BCW3104	till	0.5-0.84	green	Cr-Diopside	54.09	0.18	2.43	0.93	3.18	0.07	16.76	19.33	1.98	0.00	98.95
T705	32	94BCW3104	till	0.5-0.84	green	Cr-Diopside	53.69	0.07	1.47	1.04	2.91	0.17	18.40	20.22	1.17	0.05	99.18
T705	27	94BCW3104	till	0.5-0.84	green	Cr-Diopside	54.11	0.31	1.35	1.09	2.68	0.11	17.57	20.97	1.16	0.08	99.42
T705	37	94BCW3104	till	0.5-0.84	green	Cr-Diopside	54.00	0.04	1.56	1.15	2.82	0.13	18.35	20.27	1.28	0.04	99.66
T705	34	94BCW3104	till	0.5-0.84	green	Cr-Diopside	55.84	0.15	1.35	1.16	2.71	0.11	18.11	20.59	1.15	0.05	101.22
T705	28	94BCW3104	till	0.5-0.84	green	Cr-Diopside	55.49	0.26	1.05	1.20	2.42	0.09	17.38	21.85	1.06	0.04	100.83
T705	36	94BCW3104	till	0.5-0.84	green	Cr-Diopside	55.28	0.13	0.88	1.32	2.38	0.09	17.39	22.14	1.05	0.04	100.68
T705	26	94BCW3104	till	0.5-0.84	green	Cr-Diopside	54.64	0.22	1.64	1.38	2.58	0.12	17.24	20.85	1.37	0.06	100.10
T664	82	94BCW3104	till	0.25-0.5	green	Diopside	53.26	0.04	1.19	0.37	4.36	0.12	16.71	23.30	0.67	0.00	100.02
T664	79	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.59	0.17	1.68	1.55	2.35	0.12	17.78	21.11	1.61	0.06	101.01
T664	64	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	53.55	0.20	1.16	1.63	2.52	0.17	17.00	21.71	1.31	0.05	99.29
T664	81	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.93	0.17	2.40	1.74	2.60	0.08	17.13	19.47	2.29	0.00	100.82
T664	69	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.75	0.03	1.55	1.75	2.27	0.12	17.64	20.89	1.62	0.02	100.62
T664	76	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.41	0.26	1.39	1.95	2.57	0.09	17.42	20.69	1.75	0.02	100.55
T664	62	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	53.91	0.21	1.42	2.08	2.49	0.08	17.29	20.60	1.72	0.05	99.87
T664	72	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.76	0.25	1.13	2.09	2.12	0.08	17.76	20.88	1.78	0.03	100.87
T664	80	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.45	0.26	1.41	2.20	2.41	0.06	17.12	20.81	1.84	0.01	100.55
T664	68	94BCW3104	till	0.25-0.5	green	HiCr-Diopside	54.38	0.24	1.51	2.24	2.50	0.11	17.02	20.39	1.90	0.04	100.32
T705	33	94BCW3104	till	0.5-0.84	green	HiCr-Diopside	53.65	0.11	0.54	1.53	2.62	0.14	17.44	23.41	0.65	0.01	100.10
T705	29	94BCW3104	till	0.5-0.84	green	HiCr-Diopside	54.96	0.12	1.37	2.52	2.33	0.13	16.60	20.29	1.73	0.03	100.07
T705	30	94BCW3104	till	0.5-0.84	green	HiCr-Diopside	54.54	0.11	1.43	2.72	2.42	0.11	16.82	19.81	1.87	0.06	99.90
T664	113	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.44	0.14	1.98	0.51	3.00	0.14	18.51	19.66	1.45	0.05	99.88
T664	151	94BCW3105	till	0.25-0.5	green	Cr-Diopside	55.18	0.15	1.31	0.96	2.65	0.07	18.97	21.30	1.17	0.06	101.84
T664	130	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.59	0.21	1.33	1.00	2.73	0.09	17.93	21.49	1.37	0.04	100.78
T664	140	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.85	0.08	1.49	1.01	2.77	0.08	17.89	21.22	1.28	0.07	99.73
T664	129	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.52	0.12	1.37	1.04	2.49	0.15	18.47	21.41	1.23	0.06	100.84
T664	121	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.02	0.10	1.31	1.08	2.67	0.14	18.34	21.36	1.14	0.05	100.20
T664	126	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.65	0.08	1.30	1.09	2.56	0.15	18.55	21.18	1.17	0.08	100.80
T664	122	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.47	0.12	1.44	1.13	2.64	0.14	18.24	21.35	1.15	0.07	100.76
T664	109	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.12	0.14	1.33	1.16	2.65	0.08	18.12	21.25	1.17	0.06	100.06
T664	153	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.94	0.11	1.60	1.18	2.68	0.15	18.21	20.76	1.41	0.05	100.09
T664	157	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.76	0.13	1.57	1.19	2.57	0.09	18.13	20.74	1.49	0.06	99.72
T664	132	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.49	0.12	1.34	1.19	2.69	0.09	17.90	21.67	1.19	0.05	100.71
T664	144	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.47	0.10	1.50	1.20	2.67	0.14	17.98	21.22	1.36	0.06	99.69
T664	120	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.01	0.13	1.41	1.21	2.61	0.04	18.14	21.34	1.28	0.05	100.23
T664	116	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.02	0.14	1.53	1.22	2.65	0.14	17.94	20.95	1.33	0.04	99.96
T664	156	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.87	0.18	1.74	1.24	2.51	0.14	17.78	21.26	1.56	0.03	100.32
T664	124	94BCW3105	till	0.25-0.5	green	Cr-Diopside	55.11	0.17	1.67	1.25	2.61	0.08	18.26	20.84	1.50	0.05	101.54

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	133	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.91	0.11	1.37	1.26	2.56	0.12	17.93	21.64	1.23	0.05	100.16
T664	146	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.79	0.16	1.67	1.26	2.66	0.10	17.68	20.85	1.49	0.04	99.70
T664	152	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.62	0.18	1.64	1.27	2.68	0.10	17.63	20.98	1.57	0.05	99.71
T664	127	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.27	0.13	1.57	1.28	2.49	0.05	18.68	20.77	1.46	0.05	100.75
T664	142	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.33	0.17	1.65	1.30	2.63	0.08	17.42	21.07	1.49	0.05	99.18
T664	154	94BCW3105	till	0.25-0.5	green	Cr-Diopside	53.90	0.20	1.70	1.35	2.58	0.14	17.80	21.10	1.60	0.06	100.42
T664	118	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.03	0.16	1.67	1.36	2.58	0.12	17.66	20.76	1.52	0.05	99.91
T664	149	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.47	0.17	1.68	1.39	2.55	0.10	17.76	20.75	1.57	0.04	100.46
T664	110	94BCW3105	till	0.25-0.5	green	Cr-Diopside	54.27	0.25	1.63	1.41	2.17	0.08	17.67	21.24	1.48	0.06	100.25
T705	53	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.40	0.24	1.80	0.55	3.54	0.08	17.73	19.99	1.50	0.02	99.85
T705	56	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.60	0.22	1.42	1.05	2.94	0.11	17.39	21.39	1.20	0.06	100.39
T705	63	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.57	0.08	0.65	1.06	2.78	0.11	17.59	22.64	0.87	0.01	100.35
T705	59	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.33	0.09	1.30	1.08	2.67	0.08	18.06	21.31	1.08	0.06	100.05
T705	57	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.57	0.14	1.50	1.08	2.70	0.12	18.18	21.16	1.11	0.08	100.62
T705	55	94BCW3105	till	0.5-0.84	green	Cr-Diopside	52.91	0.03	1.22	1.13	2.74	0.15	18.69	20.66	1.00	0.08	98.60
T705	62	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.49	0.25	1.55	1.28	2.83	0.11	18.15	20.13	1.30	0.05	100.13
T705	52	94BCW3105	till	0.5-0.84	green	Cr-Diopside	53.78	0.24	1.59	1.30	2.60	0.14	17.95	20.57	1.33	0.05	99.52
T705	58	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.21	0.07	1.52	1.31	2.81	0.13	18.37	19.41	1.30	0.04	99.16
T705	60	94BCW3105	till	0.5-0.84	green	Cr-Diopside	54.52	0.06	0.36	1.44	1.82	0.08	17.71	23.11	0.86	0.02	99.98
T664	119	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.84	0.20	1.73	1.51	2.55	0.10	17.82	20.44	1.65	0.06	99.91
T664	136	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.67	0.15	1.29	1.56	2.37	0.14	17.38	21.84	1.29	0.06	99.77
T664	125	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.70	0.19	1.33	1.59	2.47	0.07	17.31	21.58	1.44	0.07	99.73
T664	123	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.19	0.07	1.33	1.60	2.63	0.06	18.30	20.53	1.32	0.07	100.10
T664	139	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.00	0.21	1.56	1.62	2.55	0.08	17.24	20.94	1.85	0.03	100.07
T664	137	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.61	0.19	1.82	1.65	2.51	0.17	17.23	20.56	1.87	0.03	99.63
T664	141	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.54	0.20	1.58	1.66	2.35	0.11	17.38	20.91	1.64	0.04	99.41
T664	131	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.04	0.05	2.24	1.75	2.43	0.08	17.50	19.32	2.24	0.05	99.71
T664	138	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.24	0.18	0.85	1.77	2.25	0.08	16.83	22.45	1.23	0.03	98.90
T664	114	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.75	0.22	1.67	1.77	2.48	0.10	17.32	20.83	1.70	0.04	99.87
T664	117	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.72	0.24	1.38	1.78	2.42	0.12	17.08	21.06	1.72	0.04	99.56
T664	145	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.82	0.19	1.67	1.79	2.53	0.09	17.67	20.80	1.70	0.08	100.34
T664	135	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.81	0.24	1.22	1.90	2.42	0.09	17.50	21.26	1.71	0.04	101.18
T664	112	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.76	0.24	1.77	1.91	2.79	0.14	16.74	20.05	2.02	0.03	99.45
T664	143	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.61	0.21	1.28	1.99	2.36	0.08	16.97	21.17	1.74	0.04	99.44
T664	134	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.26	0.26	1.26	2.01	2.43	0.12	17.04	21.29	1.75	0.01	100.42
T664	150	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.91	0.19	0.69	2.37	2.34	0.10	17.61	21.30	1.72	0.05	100.27
T664	147	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.39	0.20	1.29	2.45	2.29	0.09	16.61	21.13	1.78	0.07	99.29
T664	115	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.11	0.26	1.52	2.47	2.43	0.07	16.96	20.33	2.10	0.04	100.27
T664	111	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.64	0.08	1.31	2.58	2.26	0.12	16.36	21.00	1.96	0.02	99.33
T664	155	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	54.55	0.16	1.19	3.06	2.08	0.06	16.70	21.74	1.90	0.05	101.46

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	148	94BCW3105	till	0.25-0.5	green	HiCr-Diopside	53.90	0.18	1.56	3.33	2.29	0.08	16.78	19.22	2.48	0.08	99.90
T705	61	94BCW3105	till	0.5-0.84	green	HiCr-Diopside	55.03	0.27	1.34	2.19	2.41	0.10	16.77	20.17	1.73	0.04	100.05
T705	54	94BCW3105	till	0.5-0.84	green	HiCr-Diopside	54.14	0.22	1.57	3.10	2.42	0.12	16.92	18.96	2.16	0.06	99.66
T665	1	94BCW3106	till	0.25-0.5	green	Diopside	53.59	0.08	1.50	0.38	4.39	0.28	17.17	22.96	0.34	0.01	100.69
T665	4	94BCW3107	till	0.25-0.5	green	Cr-Diopside	53.11	0.10	1.99	0.66	4.60	0.18	16.42	22.80	0.42	0.00	100.28
T665	3	94BCW3107	till	0.25-0.5	green	Cr-Diopside	54.01	0.07	1.59	0.79	6.65	0.37	17.65	19.17	0.55	0.01	100.85
T665	5	94BCW3107	till	0.25-0.5	green	Cr-Diopside	54.67	0.12	1.45	1.14	2.54	0.12	18.19	21.07	1.09	0.08	100.46
T665	6	94BCW3107	till	0.25-0.5	green	Cr-Diopside	54.74	0.05	1.06	1.18	3.07	0.11	18.51	20.75	0.85	0.04	100.36
T665	7	94BCW3107	till	0.25-0.5	green	Cr-Diopside	54.50	0.19	1.70	1.20	2.43	0.10	17.40	21.28	1.28	0.01	100.09
T705	67	94BCW3107	till	0.5-0.84	green	Cr-Diopside	53.74	0.11	1.42	0.87	3.27	0.16	17.19	21.12	1.20	0.02	99.09
T665	11	94BCW3109	till	0.25-0.5	green	Cr-Diopside	53.36	0.17	1.69	0.71	4.05	0.09	16.39	23.67	0.35	0.01	100.49
T665	15	94BCW3112	till	0.25-0.5	green	Cr-Diopside	53.56	0.14	1.83	0.88	5.66	0.36	16.65	21.34	0.52	0.01	100.94
T665	122	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.98	0.30	1.89	0.55	3.00	0.10	17.53	19.86	1.35	0.07	98.64
T666	21	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.24	0.25	1.51	0.77	2.61	0.11	17.66	21.18	1.11	0.05	99.47
T665	110	94BCW3120	till	0.25-0.5	green	Cr-Diopside	55.22	0.26	1.38	0.86	2.75	0.07	17.77	21.73	1.12	0.07	101.22
T665	119	94BCW3120	till	0.25-0.5	green	Cr-Diopside	52.47	0.17	1.40	0.97	2.70	0.10	17.23	20.94	1.03	0.37	97.37
T666	29	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.79	0.14	1.44	0.97	2.71	0.09	18.64	21.23	1.26	0.07	101.33
T665	146	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.74	0.07	1.12	1.01	2.71	0.09	18.60	21.06	0.90	0.06	100.37
T665	104	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.90	0.15	1.46	1.02	2.64	0.05	18.23	21.15	1.08	0.07	100.75
T666	16	94BCW3120	till	0.25-0.5	green	Cr-Diopside	45.17	0.19	1.59	1.05	2.51	0.09	16.56	19.31	0.88	0.71	88.06
T665	113	94BCW3120	till	0.25-0.5	green	Cr-Diopside	55.10	0.12	1.41	1.05	2.66	0.11	18.68	20.56	1.04	0.10	100.82
T665	121	94BCW3120	till	0.25-0.5	green	Cr-Diopside	55.13	0.10	1.27	1.05	2.55	0.08	19.13	20.66	1.01	0.08	101.05
T665	98	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.45	0.14	1.37	1.05	2.54	0.08	18.00	21.34	1.01	0.05	100.02
T666	20	94BCW3120	till	0.25-0.5	green	Cr-Diopside	55.41	0.10	1.33	1.05	2.64	0.12	18.32	21.49	1.22	0.07	101.75
T665	101	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.94	0.09	1.33	1.06	2.62	0.10	18.27	21.59	1.01	0.05	101.06
T666	27	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.83	0.18	1.56	1.06	2.62	0.10	18.14	20.88	1.48	0.04	100.90
T665	149	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.95	0.12	1.34	1.07	2.51	0.10	17.97	21.57	1.05	0.05	100.73
T665	97	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.81	0.12	1.45	1.08	2.65	0.12	18.32	21.13	1.07	0.07	100.79
T665	148	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.95	0.12	1.29	1.08	2.62	0.09	18.32	20.67	0.94	0.13	99.21
T665	95	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.89	0.09	1.29	1.09	2.71	0.10	18.25	21.15	1.03	0.07	100.66
T666	17	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.61	0.28	1.63	1.10	2.93	0.12	17.87	21.21	1.43	0.07	101.25
T665	147	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.73	0.11	1.41	1.11	2.63	0.08	18.24	21.41	1.04	0.05	100.80
T666	8	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.20	0.09	1.31	1.13	2.58	0.16	18.87	21.00	1.20	0.06	100.60
T665	134	94BCW3120	till	0.25-0.5	green	Cr-Diopside	55.11	0.12	1.64	1.14	2.61	0.09	17.92	21.00	1.25	0.04	100.92
T665	105	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.43	0.10	1.29	1.16	2.60	0.15	17.85	21.51	0.94	0.06	100.07
T666	19	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.05	0.23	1.48	1.16	2.66	0.08	17.74	21.50	1.38	0.04	100.31
T665	141	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.71	0.15	1.50	1.17	2.62	0.11	18.06	21.32	1.10	0.05	100.79
T665	142	94BCW3120	till	0.25-0.5	green	Cr-Diopside	56.36	0.13	1.66	1.17	2.57	0.11	19.70	20.29	1.12	0.03	103.12
T665	96	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.91	0.11	1.35	1.17	2.70	0.04	18.22	21.26	1.09	0.05	100.91
T666	7	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.78	0.28	1.60	1.18	2.99	0.12	17.43	21.26	1.44	0.04	100.10

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	127	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.70	0.13	1.53	1.20	2.60	0.05	18.05	20.65	1.21	0.06	100.19
T665	137	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.94	0.15	1.46	1.21	2.63	0.13	17.99	21.27	1.10	0.07	100.94
T666	2	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.56	0.14	1.48	1.21	2.54	0.09	18.41	20.96	1.30	0.07	100.76
T665	109	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.97	0.09	1.42	1.22	2.62	0.10	18.19	21.20	1.11	0.02	100.93
T665	114	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.82	0.16	1.64	1.22	2.58	0.12	17.64	21.25	1.33	0.04	100.79
T665	129	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.56	0.24	1.65	1.22	2.65	0.07	17.59	21.10	1.19	0.07	100.32
T666	13	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.32	0.21	0.93	1.22	2.36	0.08	17.43	22.36	1.13	0.04	99.07
T665	102	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.98	0.12	1.61	1.23	2.74	0.09	17.99	20.46	1.22	0.07	100.50
T666	22	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.96	0.22	1.39	1.24	2.59	0.13	17.27	22.01	1.39	0.03	100.21
T666	6	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.83	0.19	1.71	1.25	2.60	0.12	17.99	20.91	1.48	0.05	100.11
T666	25	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.25	0.12	1.53	1.25	2.55	0.08	18.01	21.39	1.33	0.06	100.58
T665	112	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.92	0.15	1.41	1.26	2.63	0.14	18.00	21.09	1.23	0.05	100.88
T665	111	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.71	0.14	1.68	1.27	2.55	0.12	17.83	21.01	1.32	0.07	100.68
T666	26	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.86	0.14	1.72	1.27	2.71	0.11	18.56	20.48	1.52	0.06	101.42
T665	131	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.72	0.14	1.64	1.27	2.52	0.09	17.36	20.94	1.25	0.05	98.99
T665	94	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.76	0.23	1.67	1.28	2.44	0.09	17.64	21.06	1.30	0.03	100.50
T665	128	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.71	0.17	1.70	1.29	2.52	0.11	17.76	20.84	1.31	0.05	100.46
T665	145	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.78	0.14	1.61	1.31	2.61	0.08	17.98	20.70	1.16	0.06	100.43
T666	12	94BCW3120	till	0.25-0.5	green	Cr-Diopside	52.46	0.14	1.83	1.31	2.52	0.08	17.79	19.75	2.46	0.16	98.52
T665	140	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.97	0.25	1.35	1.32	2.31	0.10	17.88	21.81	1.09	0.08	101.15
T665	138	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.87	0.14	1.70	1.32	2.60	0.09	17.92	20.68	1.36	0.03	100.71
T665	108	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.96	0.19	1.72	1.33	2.59	0.12	17.68	20.68	1.36	0.06	100.69
T665	118	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.91	0.17	0.66	1.33	2.32	0.03	17.54	22.76	0.97	0.03	100.72
T665	135	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.83	0.17	1.74	1.34	2.65	0.07	17.65	20.95	1.31	0.06	100.76
T665	139	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.66	0.20	1.67	1.37	2.53	0.08	17.55	20.90	1.30	0.05	100.30
T665	126	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.80	0.22	1.36	1.37	2.47	0.07	17.47	21.51	1.10	0.07	100.46
T665	143	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.72	0.14	2.12	1.37	2.47	0.13	17.15	20.05	1.70	0.00	99.85
T666	10	94BCW3120	till	0.25-0.5	green	Cr-Diopside	53.73	0.22	1.61	1.39	2.66	0.13	17.47	21.13	1.51	0.15	100.00
T665	115	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.85	0.14	1.45	1.40	2.64	0.11	18.05	20.54	1.24	0.07	100.48
T666	5	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.81	0.19	1.66	1.40	2.59	0.06	17.80	20.91	1.58	0.06	101.05
T665	117	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.74	0.21	1.46	1.41	2.78	0.15	17.49	21.19	1.27	0.03	100.73
T665	124	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.33	0.04	1.30	1.41	2.67	0.10	18.32	20.87	1.06	0.06	100.14
T665	106	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.78	0.16	1.67	1.44	2.56	0.09	17.78	20.47	1.38	0.07	100.38
T666	23	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.04	0.23	1.43	1.46	2.59	0.12	17.73	21.67	1.39	0.06	100.73
T665	120	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.72	0.17	1.67	1.47	2.63	0.12	17.49	20.88	1.37	0.06	100.57
T665	93	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.56	0.16	1.60	1.49	2.54	0.09	17.35	21.03	1.39	0.06	100.25
T665	99	94BCW3120	till	0.25-0.5	green	Cr-Diopside	54.62	0.25	1.31	1.49	2.55	0.09	17.65	21.09	1.39	0.02	100.48
T706	39	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.97	0.31	1.77	0.50	3.27	0.14	18.08	19.92	1.38	0.04	100.37
T706	9	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.50	0.17	1.47	0.86	2.56	0.08	17.86	21.21	1.26	0.03	101.00
T706	18	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.90	0.24	1.38	0.87	3.09	0.12	17.92	20.65	1.09	0.05	99.30

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T706	36	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.70	0.22	1.36	0.95	2.97	0.09	18.15	20.88	1.06	0.06	100.42
T706	34	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.83	0.09	1.26	0.99	2.77	0.12	19.51	19.55	0.87	0.06	100.05
T706	45	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.33	0.09	1.55	1.08	3.00	0.09	17.43	20.63	1.24	0.06	98.48
T706	28	94BCW3120	till	0.5-0.84	green	Cr-Diopside	51.42	0.10	1.38	1.08	3.01	0.12	17.42	19.50	0.83	0.11	94.95
T706	21	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.40	0.10	1.31	1.15	2.70	0.15	18.79	20.53	1.05	0.07	101.24
T706	12	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.39	0.14	1.47	1.19	2.60	0.16	17.87	21.45	1.15	0.07	99.49
T706	40	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.52	0.16	1.64	1.19	2.63	0.08	17.93	20.28	1.36	0.06	99.84
T706	30	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.26	0.08	1.43	1.26	2.69	0.11	18.59	20.74	1.15	0.05	100.36
T706	8	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.05	0.23	1.65	1.29	2.51	0.14	17.46	20.43	1.33	0.05	99.13
T706	24	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.36	0.19	1.64	1.29	2.53	0.10	18.26	20.47	1.31	0.04	100.20
T706	3	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.14	0.23	1.66	1.31	2.90	0.15	18.19	19.87	1.49	0.07	99.99
T706	15	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.47	0.09	1.62	1.31	2.55	0.08	17.91	20.37	1.36	0.05	100.81
T706	43	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.04	0.16	1.64	1.31	2.67	0.12	17.88	20.24	1.41	0.05	100.52
T706	26	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.47	0.22	1.34	1.33	2.53	0.12	18.08	21.53	1.15	0.06	100.82
T706	5	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.73	0.22	1.74	1.33	2.50	0.10	18.03	20.59	1.37	0.06	100.68
T706	41	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.78	0.21	1.51	1.33	2.60	0.12	18.25	20.58	1.29	0.04	99.73
T706	14	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.68	0.22	1.56	1.36	2.67	0.14	17.97	20.35	1.30	0.05	99.29
T706	13	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.46	0.22	1.70	1.37	2.48	0.10	17.61	20.51	1.37	0.05	100.84
T706	10	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.82	0.14	0.90	1.41	2.52	0.09	17.53	21.97	1.08	0.04	100.50
T706	44	94BCW3120	till	0.5-0.84	green	Cr-Diopside	53.28	0.20	1.63	1.43	2.64	0.09	17.64	20.59	1.45	0.02	98.97
T706	1	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.15	0.16	0.95	1.45	2.45	0.05	17.54	21.88	1.12	0.05	100.81
T706	20	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.09	0.18	1.25	1.46	2.44	0.07	17.61	21.59	1.38	0.04	100.11
T706	42	94BCW3120	till	0.5-0.84	green	Cr-Diopside	54.14	0.18	1.33	1.46	2.37	0.14	17.58	21.75	1.28	0.05	100.28
T706	16	94BCW3120	till	0.5-0.84	green	Cr-Diopside	55.06	0.13	1.68	1.47	2.49	0.13	17.52	20.91	1.43	0.06	100.87
T706	27	94BCW3120	till	0.5-0.84	green	Diopside	54.76	0.29	1.87	0.43	3.26	0.13	17.79	19.75	1.50	0.02	99.81
T706	17	94BCW3120	till	0.5-0.84	green	Diopside	54.59	0.26	2.26	0.44	2.75	0.08	16.86	19.08	1.32	0.06	97.70
T665	125	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.86	0.22	1.46	1.54	2.61	0.08	17.38	21.29	1.22	0.05	100.72
T666	18	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.42	0.14	2.28	1.55	2.75	0.10	17.28	19.72	2.18	0.01	100.43
T665	132	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	55.28	0.05	1.45	1.59	1.74	0.10	17.21	22.04	1.37	0.00	100.81
T666	9	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.19	0.28	1.66	1.60	2.66	0.09	17.30	20.44	1.91	0.05	100.16
T666	4	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.28	0.25	1.61	1.62	2.65	0.09	18.03	20.52	1.63	0.07	100.74
T665	107	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	52.45	0.19	1.33	1.66	3.03	0.08	16.66	20.35	0.90	0.05	96.71
T665	123	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.59	0.32	1.63	1.67	2.82	0.09	17.43	19.86	1.60	0.08	100.09
T665	103	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	55.01	0.11	2.13	1.69	2.18	0.10	17.43	19.81	1.87	0.00	100.32
T665	100	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.52	0.17	1.63	1.74	2.43	0.09	17.26	20.97	1.43	0.04	100.27
T665	136	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	55.69	0.21	1.09	1.76	2.46	0.10	17.44	21.78	1.26	0.04	101.82
T666	32	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	53.76	0.18	1.67	1.82	2.51	0.09	17.37	20.52	1.73	0.04	99.69
T666	31	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	53.93	0.25	1.40	1.86	2.53	0.11	16.96	20.72	1.87	0.07	99.70
T665	150	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.73	0.21	1.44	1.91	2.61	0.11	16.99	20.81	1.60	0.04	100.45
T666	14	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.53	0.20	1.33	2.09	2.40	0.11	17.30	21.00	1.77	0.03	100.77

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	15	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	53.75	0.28	1.64	2.20	2.54	0.09	17.15	20.21	1.89	0.06	99.81
T666	3	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.64	0.03	1.45	2.29	2.42	0.11	17.30	20.71	2.04	0.02	100.99
T665	144	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.75	0.21	1.49	2.32	2.04	0.07	17.17	20.58	1.53	0.05	100.19
T666	30	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.12	0.19	1.38	2.48	2.56	0.11	16.66	21.38	1.82	0.05	100.73
T665	130	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	55.28	0.14	0.44	2.48	2.36	0.09	16.71	22.08	1.39	0.01	100.98
T666	11	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.01	0.13	1.13	3.02	1.84	0.09	16.99	20.64	1.99	0.04	99.89
T665	116	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.77	0.15	1.90	3.64	2.19	0.12	16.61	18.50	2.36	0.03	100.29
T665	133	94BCW3120	till	0.25-0.5	green	HiCr-Diopside	54.75	0.08	0.85	4.58	2.18	0.09	16.22	18.75	2.49	0.04	100.01
T706	33	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	53.95	0.18	1.35	1.50	2.33	0.10	17.66	21.22	1.19	0.05	99.53
T706	32	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.00	0.14	1.48	1.51	2.55	0.10	17.77	20.84	1.22	0.07	99.68
T706	31	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.39	0.15	1.63	1.51	2.53	0.12	17.84	20.33	1.45	0.04	99.98
T706	4	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.52	0.26	1.30	1.51	2.52	0.11	17.93	20.67	1.41	0.04	101.26
T706	38	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.85	0.20	1.39	1.60	2.46	0.10	17.15	20.51	1.51	0.04	100.79
T706	11	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.44	0.31	1.79	1.64	2.80	0.05	17.34	19.95	1.68	0.02	100.00
T706	19	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.15	0.34	1.68	1.65	2.68	0.11	17.43	19.83	1.73	0.04	100.63
T706	37	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.00	0.18	1.64	1.69	2.53	0.11	17.59	19.94	1.48	0.06	99.23
T706	46	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.31	0.22	2.09	1.73	2.68	0.16	17.38	19.22	1.99	0.02	100.78
T706	47	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.70	0.23	1.73	1.91	3.33	0.13	18.86	17.69	1.72	0.07	100.37
T706	22	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.38	0.17	1.37	1.92	2.52	0.07	16.91	20.22	1.66	0.04	99.27
T706	29	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.74	0.22	1.37	2.02	2.35	0.06	16.95	20.46	1.70	0.04	100.89
T706	23	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.25	0.17	1.33	2.11	2.68	0.12	17.12	19.60	1.50	0.13	99.01
T706	2	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.43	0.26	1.41	2.14	2.42	0.15	17.51	20.00	1.71	0.03	100.06
T706	7	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.10	0.10	2.14	2.27	2.63	0.15	16.80	19.00	2.08	0.04	100.30
T706	35	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	53.14	0.24	1.59	2.54	2.58	0.15	16.78	19.60	1.97	0.07	98.66
T706	25	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	55.50	0.18	1.67	2.54	2.47	0.09	16.96	20.63	1.74	0.04	101.82
T706	6	94BCW3120	till	0.5-0.84	green	HiCr-Diopside	54.00	0.28	1.49	2.71	2.36	0.09	16.95	20.20	1.74	0.07	99.90
T687	67	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.24	0.17	0.64	0.63	2.81	0.13	17.89	22.51	0.66	0.00	98.67
T687	19	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.33	0.23	1.36	0.67	2.80	0.10	17.34	20.94	1.04	0.04	97.84
T687	35	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.97	0.16	0.80	0.76	2.71	0.11	17.32	22.41	0.90	0.02	98.17
T687	40	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.02	0.19	1.31	0.80	2.65	0.15	17.26	21.87	0.99	0.03	99.26
T687	14	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.62	0.37	1.79	0.87	3.06	0.13	17.39	19.91	1.50	0.03	98.66
T687	108	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.35	0.28	1.41	0.92	2.77	0.06	17.44	20.99	1.30	0.03	99.53
T687	39	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.69	0.08	2.06	0.93	2.53	0.08	16.92	19.87	1.50	0.01	97.65
T687	105	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.48	0.20	1.34	0.97	2.67	0.13	17.48	20.54	1.10	0.05	97.94
T687	100	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.13	0.08	2.28	0.98	2.81	0.11	16.94	19.45	1.81	0.02	97.60
T687	78	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.08	0.28	1.28	0.99	2.47	0.09	17.69	21.17	1.03	0.05	99.13
T687	76	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.94	0.22	1.37	1.01	2.86	0.13	17.74	19.76	1.06	0.05	99.13
T687	51	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.74	0.19	1.32	1.02	2.59	0.15	17.57	20.98	1.05	0.05	99.66
T687	47	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.76	0.14	1.43	1.04	2.70	0.09	17.87	20.29	1.07	0.06	97.44
T687	8	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.56	0.18	1.63	1.05	2.84	0.08	18.44	19.58	1.30	0.03	99.70

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	66	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.13	0.10	1.29	1.05	2.62	0.11	17.91	20.92	1.04	0.05	98.20
T687	72	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.47	0.06	1.24	1.06	2.57	0.04	17.45	20.94	1.05	0.03	96.91
T687	109	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.16	0.13	1.26	1.06	2.77	0.10	18.17	20.23	1.03	0.08	97.99
T687	88	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.45	0.24	1.53	1.07	2.92	0.11	17.40	20.63	1.23	0.05	99.63
T687	17	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.07	0.15	1.20	1.07	2.70	0.09	18.32	20.20	0.97	0.05	98.83
T687	31	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.76	0.09	1.30	1.07	2.75	0.07	18.62	20.06	1.01	0.08	98.81
T687	111	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.26	0.24	1.59	1.07	2.91	0.14	18.26	19.76	1.28	0.05	99.54
T687	50	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.85	0.09	1.18	1.07	2.70	0.10	18.31	20.13	0.97	0.07	99.47
T687	58	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.89	0.12	1.27	1.08	2.64	0.16	17.55	20.42	1.02	0.05	98.19
T687	1	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.31	0.07	1.27	1.09	2.67	0.11	17.70	20.74	1.03	0.05	98.05
T687	52	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.27	0.11	1.25	1.09	2.55	0.11	17.88	21.23	1.04	0.05	98.58
T687	87	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.96	0.03	1.20	1.10	2.67	0.08	18.41	20.43	0.97	0.08	99.94
T687	99	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.65	0.21	1.41	1.10	2.55	0.13	17.66	21.20	1.14	0.03	99.09
T687	91	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.55	0.09	1.23	1.11	2.64	0.13	18.54	20.66	1.02	0.05	100.02
T687	85	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.08	0.09	1.32	1.11	2.60	0.09	18.04	20.77	1.07	0.06	98.22
T687	96	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.17	0.18	1.49	1.11	2.61	0.11	17.54	20.43	1.17	0.05	97.86
T687	7	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.99	0.09	1.40	1.12	2.60	0.10	17.78	20.37	1.23	0.07	97.74
T687	80	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.13	0.09	1.31	1.13	2.72	0.11	18.04	20.62	1.09	0.05	98.27
T687	5	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.30	0.19	1.44	1.14	2.52	0.12	17.30	21.21	1.19	0.07	99.45
T687	10	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.95	0.06	1.42	1.14	2.61	0.12	17.51	21.04	1.07	0.06	98.98
T687	95	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.65	0.10	1.30	1.14	2.56	0.12	17.76	20.75	1.05	0.08	98.50
T687	79	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.60	0.15	1.40	1.14	2.66	0.12	17.74	20.57	1.17	0.06	98.61
T687	69	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.32	0.02	1.27	1.14	2.51	0.13	17.95	20.91	1.06	0.06	98.38
T687	115	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.38	0.11	1.33	1.15	2.69	0.11	17.74	20.02	1.09	0.06	97.67
T687	46	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.20	0.19	1.52	1.15	2.66	0.13	17.88	20.14	1.20	0.04	99.12
T687	42	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.89	0.15	1.33	1.16	2.97	0.11	18.07	18.95	0.98	0.07	96.66
T687	71	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.14	0.15	1.43	1.16	2.58	0.08	17.96	19.96	1.21	0.14	98.80
T687	6	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.68	0.30	1.62	1.17	2.84	0.10	17.17	19.69	1.57	0.05	97.19
T687	32	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.25	0.13	1.65	1.18	2.72	0.11	17.81	19.53	1.36	0.03	98.78
T687	83	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.13	0.06	1.39	1.18	2.88	0.13	18.20	19.52	1.10	0.07	97.64
T687	53	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.57	0.11	1.47	1.19	2.62	0.12	17.64	20.43	1.15	0.07	97.37
T687	38	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.76	0.15	1.32	1.21	2.51	0.09	17.99	20.41	1.02	0.07	98.51
T687	26	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.66	0.12	1.55	1.21	2.45	0.11	18.01	19.96	1.28	0.05	99.39
T687	64	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.04	0.08	1.39	1.21	2.62	0.08	17.77	20.24	1.15	0.06	98.62
T687	55	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.21	0.02	1.30	1.22	2.46	0.07	18.50	20.10	1.14	0.08	98.09
T687	34	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.49	0.17	1.63	1.24	2.67	0.12	17.71	19.89	1.25	0.17	98.33
T687	49	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.48	0.15	1.35	1.25	2.56	0.12	18.11	20.58	1.14	0.05	98.80
T687	45	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.97	0.14	1.74	1.25	2.64	0.05	17.52	19.95	1.27	0.05	98.58
T687	20	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.29	0.14	1.56	1.26	2.64	0.10	17.80	20.17	1.29	0.06	99.31
T687	15	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.97	0.10	1.61	1.26	2.63	0.10	17.63	20.64	1.33	0.05	99.33

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	59	94BCW3129	till	0.25-0.5	green	Cr-Diopside	52.73	0.17	1.61	1.26	2.67	0.09	17.32	20.77	1.34	0.06	98.00
T687	57	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.78	0.10	1.61	1.26	2.68	0.10	17.66	20.23	1.23	0.07	98.73
T687	75	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.32	0.23	1.36	1.27	2.42	0.09	17.10	21.66	1.23	0.05	99.74
T687	113	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.10	0.16	1.59	1.29	2.61	0.13	17.28	20.15	1.35	0.05	98.71
T687	92	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.79	0.13	1.57	1.29	2.62	0.15	17.98	20.13	1.31	0.05	99.01
T687	112	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.33	0.27	1.53	1.29	2.53	0.09	17.02	20.16	1.50	0.02	97.74
T687	30	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.36	0.20	1.68	1.29	2.64	0.10	17.87	20.34	1.31	0.03	98.83
T687	24	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.09	0.14	1.42	1.30	2.53	0.07	17.48	21.22	1.16	0.06	99.46
T687	60	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.84	0.09	1.61	1.30	2.61	0.09	17.54	20.03	1.33	0.06	98.50
T687	103	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.45	0.15	1.60	1.30	2.62	0.12	17.92	20.33	1.34	0.05	98.87
T687	44	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.07	0.09	1.61	1.31	2.49	0.07	17.60	19.92	1.32	0.05	98.53
T687	77	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.26	0.18	1.66	1.31	2.61	0.11	17.53	20.17	1.36	0.06	98.25
T687	16	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.09	0.19	1.61	1.32	2.47	0.08	17.58	20.33	1.32	0.04	99.01
T687	82	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.75	0.13	1.58	1.33	2.57	0.12	17.71	20.22	1.30	0.05	99.76
T687	117	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.91	0.22	1.46	1.33	2.44	0.14	17.28	20.63	1.22	0.03	98.65
T687	48	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.96	0.35	0.52	1.34	2.26	0.10	17.71	22.88	0.57	0.02	99.71
T687	36	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.19	0.18	1.64	1.35	2.51	0.01	17.38	20.41	1.34	0.06	99.05
T687	121	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.60	0.25	1.60	1.35	2.84	0.12	17.71	19.17	1.38	0.05	99.06
T687	120	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.94	0.12	1.60	1.39	2.64	0.10	17.83	19.35	1.32	0.04	98.31
T687	18	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.18	0.11	1.29	1.40	2.45	0.12	17.28	20.74	1.37	0.04	98.96
T687	93	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.27	0.23	1.30	1.40	2.59	0.11	17.21	21.07	1.13	0.06	99.38
T687	11	94BCW3129	till	0.25-0.5	green	Cr-Diopside	54.74	0.16	1.62	1.42	2.36	0.12	17.41	20.56	1.36	0.04	99.78
T687	25	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.36	0.23	1.02	1.42	2.37	0.11	16.92	21.68	1.12	0.03	98.25
T687	37	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.60	0.16	1.20	1.45	2.48	0.09	17.07	21.15	1.26	0.06	98.53
T687	110	94BCW3129	till	0.25-0.5	green	Cr-Diopside	53.39	0.11	1.68	1.47	2.68	0.09	17.34	20.05	1.37	0.08	98.26
T706	89	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.50	0.25	1.42	0.76	2.82	0.09	17.50	21.32	1.03	0.06	99.74
T706	81	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.05	0.26	1.32	0.95	2.53	0.05	17.18	21.59	1.30	0.08	99.30
T706	67	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.20	0.16	1.39	1.04	2.58	0.10	17.71	21.13	1.19	0.04	99.53
T706	69	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.04	0.26	1.26	1.05	2.52	0.11	17.62	21.52	1.10	0.03	99.51
T706	78	94BCW3129	till	0.5-0.84	green	Cr-Diopside	55.11	0.16	1.33	1.07	2.58	0.08	17.93	20.89	1.04	0.05	100.23
T706	79	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.08	0.09	1.23	1.07	2.62	0.07	18.48	20.67	1.05	0.05	99.40
T706	73	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.39	0.17	1.30	1.10	2.67	0.13	17.72	21.33	1.06	0.06	99.94
T706	68	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.15	0.08	1.27	1.11	2.64	0.09	18.21	20.79	1.10	0.08	99.51
T706	92	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.71	0.08	1.33	1.11	2.58	0.12	17.88	21.34	1.11	0.06	100.32
T706	76	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.02	0.02	1.36	1.13	2.62	0.14	17.94	21.27	1.06	0.06	99.61
T706	91	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.31	0.26	1.39	1.14	2.51	0.09	17.85	21.42	1.19	0.07	100.22
T706	75	94BCW3129	till	0.5-0.84	green	Cr-Diopside	53.71	0.14	1.54	1.19	2.52	0.08	18.05	20.42	1.30	0.06	99.02
T706	82	94BCW3129	till	0.5-0.84	green	Cr-Diopside	53.14	0.14	1.72	1.21	2.84	0.14	18.89	19.61	1.11	0.21	99.00
T706	90	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.95	0.10	1.26	1.22	2.66	0.12	18.13	21.14	1.11	0.09	100.79
T706	74	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.48	0.25	1.48	1.25	2.67	0.09	18.06	21.02	1.15	0.06	100.53

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T706	80	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.49	0.10	1.68	1.28	2.60	0.07	17.78	20.32	1.34	0.04	99.70
T706	72	94BCW3129	till	0.5-0.84	green	Cr-Diopside	53.12	0.08	1.58	1.29	2.74	0.09	17.82	20.32	1.31	0.05	98.41
T706	93	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.96	0.13	1.50	1.37	2.88	0.16	18.37	18.95	1.33	0.07	99.72
T706	88	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.83	0.15	0.80	1.37	2.23	0.09	17.78	21.96	1.06	0.02	100.29
T706	85	94BCW3129	till	0.5-0.84	green	Cr-Diopside	54.08	0.23	1.69	1.39	2.44	0.09	17.11	20.12	1.47	0.06	98.68
T687	4	94BCW3129	till	0.25-0.5	green	Diopside	53.83	0.07	0.80	0.15	5.68	0.21	15.56	23.31	0.50	0.00	100.10
T687	28	94BCW3129	till	0.25-0.5	green	Diopside	54.03	0.28	1.85	0.37	3.35	0.11	17.18	19.83	1.38	0.04	98.41
T687	106	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.11	0.24	1.63	1.53	2.55	0.12	17.33	20.03	1.46	0.04	99.02
T687	70	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.93	0.25	1.33	1.55	2.31	0.13	17.25	20.82	1.21	0.06	98.83
T687	118	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.15	0.26	1.57	1.57	2.73	0.12	17.09	19.95	1.65	0.03	99.11
T687	119	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	52.32	0.12	0.95	1.57	2.07	0.06	17.18	21.94	1.09	0.03	97.32
T687	13	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.28	0.27	1.46	1.57	2.54	0.09	17.44	19.97	1.54	0.04	99.21
T687	21	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.47	0.24	1.25	1.58	2.37	0.10	17.59	21.27	1.12	0.06	100.05
T687	29	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	52.52	0.24	1.76	1.59	2.59	0.07	17.09	19.62	1.45	0.09	97.02
T687	61	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.27	0.22	1.18	1.64	2.40	0.09	17.30	21.09	1.33	0.04	98.56
T687	84	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.14	0.09	1.52	1.65	2.28	0.12	17.33	19.82	1.45	0.05	97.44
T687	62	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.64	0.22	1.41	1.66	2.50	0.11	17.05	20.75	1.50	0.03	98.87
T687	23	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.55	0.22	1.74	1.66	2.63	0.11	17.20	19.85	1.70	0.05	98.72
T687	22	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.88	0.26	1.59	1.68	2.70	0.12	17.05	19.83	1.72	0.03	98.86
T687	89	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.19	0.29	1.42	1.71	2.39	0.10	17.06	20.43	1.48	0.04	99.11
T687	65	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.44	0.15	1.67	1.74	2.50	0.14	17.61	20.06	1.45	0.05	98.80
T687	104	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.47	0.14	1.56	1.76	2.55	0.09	17.52	20.02	1.32	0.03	98.45
T687	56	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.03	0.22	1.49	1.76	2.64	0.10	17.21	19.87	1.64	0.04	98.99
T687	90	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.07	0.21	1.39	1.77	2.43	0.09	17.69	20.61	1.37	0.06	99.69
T687	116	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.33	0.17	1.47	1.80	2.37	0.13	17.34	20.77	1.27	0.05	98.69
T687	54	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.74	0.37	1.67	1.84	2.54	0.10	16.70	19.91	1.75	0.03	98.64
T687	102	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.48	0.11	0.71	1.86	1.94	0.06	17.25	22.16	1.14	0.04	99.74
T687	94	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.42	0.24	1.70	1.86	2.53	0.07	16.66	19.57	1.85	0.02	97.93
T687	41	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.56	0.30	1.60	1.90	2.57	0.11	16.86	19.45	1.81	0.03	98.17
T687	2	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.45	0.21	1.63	1.98	2.56	0.11	17.21	19.00	1.79	0.02	98.94
T687	9	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.41	0.18	1.40	1.99	2.59	0.15	17.20	19.25	1.72	0.06	98.94
T687	101	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.69	0.17	1.32	2.08	2.38	0.07	17.01	19.96	1.68	0.03	98.40
T687	81	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.32	0.18	1.55	2.10	2.56	0.09	17.54	19.71	1.49	0.04	98.58
T687	12	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.47	0.30	1.78	2.11	2.68	0.12	16.96	19.65	1.81	0.05	98.94
T687	43	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.51	0.35	1.69	2.12	2.53	0.06	16.88	19.32	1.78	0.04	98.28
T687	107	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.38	0.05	2.52	2.13	2.42	0.11	16.26	18.42	2.37	0.03	97.70
T687	68	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.33	0.20	1.56	2.16	2.52	0.09	16.74	20.01	1.75	0.04	98.39
T687	73	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.96	0.16	1.69	2.24	2.31	0.13	16.82	20.10	1.77	0.03	99.22
T687	27	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.99	0.32	1.38	2.28	2.41	0.08	16.95	19.96	1.74	0.04	99.15
T687	98	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	55.09	0.26	1.67	2.34	2.43	0.14	16.98	19.08	1.99	0.04	100.02

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	114	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.29	0.27	1.38	2.37	2.34	0.09	16.82	19.78	1.84	0.06	98.24
T687	33	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.48	0.02	1.17	2.82	1.90	0.10	17.00	20.62	1.67	0.02	98.79
T687	63	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.20	0.03	1.27	3.14	2.25	0.07	16.39	19.04	2.12	0.03	98.54
T687	86	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	54.45	0.15	0.48	3.25	2.00	0.07	16.85	20.14	1.76	0.03	99.16
T687	3	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	55.09	0.09	1.00	4.22	2.33	0.12	15.86	18.37	2.45	0.03	99.55
T687	97	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.68	0.14	0.75	4.23	2.18	0.12	15.88	18.62	2.39	0.00	97.98
T687	74	94BCW3129	till	0.25-0.5	green	HiCr-Diopside	53.20	0.06	0.72	4.62	1.96	0.10	16.32	18.67	2.34	0.05	98.04
T706	86	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	53.71	0.20	0.93	1.50	2.38	0.12	17.41	22.27	1.13	0.04	99.69
T706	83	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	54.27	0.05	1.66	1.55	2.64	0.06	17.68	20.47	1.47	0.06	99.90
T706	71	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	54.24	0.23	1.26	1.63	2.57	0.08	17.11	20.92	1.47	0.04	99.55
T706	70	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	54.04	0.14	1.20	1.70	2.52	0.06	17.03	21.01	1.28	0.04	99.02
T706	84	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	55.14	0.34	1.72	2.14	2.67	0.11	16.71	19.46	1.92	0.03	100.24
T706	77	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	53.56	0.10	1.58	2.16	2.63	0.13	17.15	19.63	1.89	0.05	98.87
T706	87	94BCW3129	till	0.5-0.84	green	HiCr-Diopside	54.94	0.07	0.56	2.61	1.90	0.10	17.00	21.38	1.50	0.00	100.05
T689	100	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.91	0.15	0.79	0.51	2.63	0.06	17.29	22.85	0.78	0.02	98.99
T689	27	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.60	0.17	0.65	0.59	3.07	0.12	17.25	22.11	0.75	0.11	98.42
T689	37	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.25	0.17	1.78	0.60	2.93	0.08	17.04	20.04	1.39	0.01	97.29
T689	52	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.28	0.09	1.17	0.61	3.63	0.16	17.05	20.71	1.10	0.04	97.83
T689	12	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.28	0.16	1.33	0.67	6.21	0.15	16.02	21.42	0.55	0.01	98.80
T689	120	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.13	0.25	1.39	0.72	2.93	0.09	17.19	20.92	1.07	0.05	97.73
T689	16	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.27	0.29	1.97	0.73	2.82	0.16	17.10	19.63	1.53	0.04	97.53
T689	107	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.77	0.21	0.91	0.76	2.60	0.12	17.02	21.77	0.89	0.02	97.06
T689	38	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.53	0.22	1.65	0.79	2.65	0.09	16.84	20.14	1.43	0.04	97.38
T689	126	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.91	0.29	1.20	0.82	2.46	0.09	17.42	21.08	1.13	0.03	97.42
T689	44	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.17	0.19	1.27	0.88	2.73	0.12	17.82	20.02	0.99	0.05	98.24
T689	110	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.70	0.24	1.34	0.90	3.10	0.12	17.65	20.38	1.12	0.06	98.61
T689	97	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.70	0.20	1.36	0.90	2.67	0.08	17.11	20.88	1.09	0.05	99.04
T689	109	94BCW3138	till	0.25-0.5	green	Cr-Diopside	51.94	0.12	1.53	0.91	5.25	0.23	15.70	21.65	0.53	0.00	97.84
T689	46	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.91	0.00	0.65	0.91	3.27	0.17	17.67	21.63	0.62	0.04	97.86
T689	102	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.55	0.13	1.38	0.93	2.59	0.11	17.81	20.73	1.08	0.05	98.35
T689	67	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.16	0.19	1.26	0.95	3.00	0.12	18.23	19.54	1.13	0.05	98.63
T689	68	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.15	0.30	1.33	0.98	2.68	0.09	17.36	21.40	1.07	0.04	99.40
T689	90	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.68	0.35	1.58	0.98	2.67	0.11	16.86	19.94	1.44	0.01	97.62
T689	113	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.03	0.11	1.33	1.00	2.40	0.11	18.14	20.50	1.04	0.04	97.70
T689	99	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.34	0.10	1.48	1.01	2.96	0.12	17.34	19.92	1.21	0.04	96.51
T689	31	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.23	0.13	1.27	1.05	2.62	0.10	17.86	20.00	0.99	0.05	97.29
T689	24	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.59	0.19	1.29	1.06	2.58	0.09	17.62	21.35	1.02	0.06	99.86
T689	71	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.62	0.15	1.52	1.07	2.73	0.11	17.37	20.49	1.15	0.05	98.26
T689	15	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.00	0.17	1.58	1.08	2.92	0.09	17.05	19.87	1.03	0.07	96.87
T689	114	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.71	0.08	1.37	1.08	2.40	0.10	17.32	20.99	1.09	0.08	98.21

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T689	57	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.86	0.07	1.28	1.09	2.58	0.07	17.74	20.54	1.02	0.07	97.32
T689	74	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.42	0.15	1.36	1.09	2.55	0.08	17.90	20.40	1.15	0.06	98.15
T689	21	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.85	0.08	1.28	1.10	2.53	0.11	17.53	20.84	1.00	0.06	97.37
T689	20	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.15	0.12	1.32	1.10	2.47	0.11	17.59	20.55	1.01	0.08	98.49
T689	30	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.37	0.21	1.20	1.10	2.62	0.12	17.95	20.21	0.98	0.05	97.81
T689	51	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.33	0.12	1.28	1.12	2.36	0.11	17.52	21.18	1.02	0.06	99.09
T689	86	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.92	0.10	1.32	1.13	2.49	0.13	17.19	20.65	1.01	0.04	97.98
T689	118	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.87	0.20	1.33	1.13	2.51	0.09	17.21	20.93	1.10	0.05	98.42
T689	13	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.93	0.21	1.23	1.14	2.51	0.08	17.26	21.19	1.06	0.05	98.64
T689	54	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.60	0.13	1.29	1.16	2.59	0.09	17.56	20.93	1.00	0.06	98.39
T689	108	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.92	0.21	0.74	1.16	2.31	0.08	17.05	22.08	0.94	0.03	98.51
T689	84	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.11	0.09	1.24	1.17	2.49	0.08	17.85	20.36	1.04	0.06	98.48
T689	82	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.65	0.11	1.50	1.18	2.54	0.08	17.49	20.31	1.09	0.04	97.97
T689	48	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.62	0.16	1.57	1.18	2.65	0.09	17.59	20.16	1.25	0.05	98.32
T689	66	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.10	0.17	1.57	1.18	2.56	0.10	17.03	20.68	1.28	0.05	97.71
T689	26	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.11	0.00	1.24	1.18	2.61	0.10	17.74	20.46	1.01	0.06	98.51
T689	96	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.89	0.17	1.50	1.19	2.64	0.09	17.48	20.40	1.17	0.07	98.59
T689	119	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.70	0.23	0.86	1.19	2.44	0.08	17.46	22.07	1.03	0.04	98.10
T689	116	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.45	0.14	1.56	1.20	2.74	0.07	17.58	20.26	1.22	0.06	97.25
T689	122	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.38	0.10	1.34	1.20	2.55	0.13	17.55	20.92	1.10	0.06	98.33
T689	123	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.69	0.17	1.22	1.21	2.69	0.14	17.56	20.25	1.07	0.06	98.07
T689	19	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.51	0.13	1.54	1.22	2.60	0.14	17.19	19.91	1.25	0.06	97.53
T689	17	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.65	0.13	1.59	1.22	2.58	0.12	17.21	20.52	1.11	0.06	98.17
T689	88	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.36	0.18	1.59	1.22	2.56	0.11	17.32	20.20	1.28	0.06	97.87
T689	106	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.56	0.20	0.71	1.22	2.37	0.08	17.40	22.68	0.94	0.04	99.19
T689	70	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.56	0.22	1.41	1.23	2.49	0.11	17.43	20.79	1.16	0.06	98.46
T689	93	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.68	0.20	1.50	1.24	2.53	0.12	17.24	20.24	1.27	0.06	97.08
T689	78	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.30	0.08	1.58	1.25	2.59	0.10	17.12	20.13	1.29	0.05	97.48
T689	32	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.30	0.10	1.59	1.25	2.58	0.13	17.27	19.82	1.29	0.05	96.37
T689	63	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.92	0.12	1.33	1.25	2.57	0.07	17.08	21.15	1.07	0.06	97.61
T689	91	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.74	0.01	1.55	1.25	2.59	0.13	17.48	20.37	1.21	0.06	99.39
T689	61	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.15	0.14	1.35	1.26	2.63	0.08	17.42	20.50	1.12	0.07	97.71
T689	23	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.79	0.08	1.60	1.26	2.61	0.09	17.09	19.98	1.30	0.06	96.86
T689	117	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.04	0.14	0.78	1.26	2.29	0.09	17.05	21.80	0.88	0.08	98.40
T689	79	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.05	0.16	1.37	1.28	2.55	0.09	16.80	20.77	1.24	0.06	97.37
T689	80	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.54	0.16	1.61	1.29	2.58	0.11	16.81	20.21	1.34	0.05	97.70
T689	83	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.33	0.06	1.56	1.29	2.52	0.09	17.81	19.54	1.25	0.05	97.51
T689	124	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.18	0.13	1.44	1.29	2.53	0.06	17.51	20.26	1.17	0.07	97.65
T689	35	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.92	0.20	1.34	1.30	2.55	0.11	17.20	20.82	1.19	0.07	97.69
T689	18	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.93	0.14	1.64	1.30	2.60	0.11	17.17	20.38	1.31	0.06	98.64

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T689	104	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.99	0.08	1.56	1.30	2.56	0.16	16.85	20.43	1.29	0.06	98.27
T689	39	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.80	0.17	0.95	1.30	2.42	0.06	16.96	21.70	1.03	0.03	97.41
T689	94	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.11	0.18	1.63	1.30	2.58	0.10	17.40	20.27	1.31	0.04	98.91
T689	40	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.71	0.17	1.57	1.31	2.51	0.14	17.50	20.41	1.24	0.05	98.61
T689	22	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.25	0.04	1.40	1.32	2.65	0.15	18.08	19.84	1.15	0.05	97.93
T689	33	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.60	0.23	1.40	1.32	2.38	0.13	16.83	20.83	1.37	0.03	98.10
T689	77	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.56	0.04	1.60	1.33	2.44	0.09	16.98	20.08	1.36	0.07	97.53
T689	112	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.19	0.22	1.70	1.33	2.46	0.06	17.29	19.83	1.36	0.04	97.47
T689	76	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.79	0.14	1.64	1.33	2.53	0.07	16.95	20.77	1.38	0.05	98.66
T689	92	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.62	0.09	1.58	1.34	2.42	0.10	17.00	20.52	1.32	0.03	98.01
T689	56	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.42	0.15	1.58	1.35	2.59	0.13	17.41	19.88	1.30	0.10	97.89
T689	103	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.65	0.19	1.67	1.37	2.65	0.10	16.73	20.11	1.59	0.04	98.10
T689	73	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.97	0.08	1.62	1.38	2.63	0.12	16.79	20.03	1.33	0.05	98.00
T689	42	94BCW3138	till	0.25-0.5	green	Cr-Diopside	54.98	0.18	1.56	1.39	2.35	0.06	17.09	20.23	1.31	0.09	99.25
T689	43	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.73	0.12	1.60	1.42	2.57	0.06	17.22	20.28	1.22	0.03	98.24
T689	125	94BCW3138	till	0.25-0.5	green	Cr-Diopside	53.59	0.40	1.26	1.45	2.34	0.08	17.19	21.06	1.17	0.06	98.61
T689	41	94BCW3138	till	0.25-0.5	green	Cr-Diopside	52.75	0.15	1.62	1.49	2.53	0.09	17.02	20.31	1.38	0.06	97.39
T707	29	94BCW3138	till	0.5-0.84	green	Cr-Diopside	53.47	0.13	1.16	1.09	2.76	0.11	17.68	19.82	0.99	0.07	97.28
T707	28	94BCW3138	till	0.5-0.84	green	Cr-Diopside	53.94	0.15	1.18	1.12	2.66	0.10	18.60	20.62	1.03	0.06	99.44
T707	18	94BCW3138	till	0.5-0.84	green	Cr-Diopside	54.11	0.14	1.33	1.13	2.66	0.09	18.26	20.99	1.05	0.07	99.82
T707	21	94BCW3138	till	0.5-0.84	green	Cr-Diopside	55.06	0.13	1.32	1.16	2.73	0.12	18.37	20.17	1.13	0.07	100.26
T707	20	94BCW3138	till	0.5-0.84	green	Cr-Diopside	54.29	0.21	1.46	1.21	2.97	0.13	18.72	19.54	1.23	0.03	99.79
T707	25	94BCW3138	till	0.5-0.84	green	Cr-Diopside	55.22	0.25	1.47	1.24	2.74	0.13	17.73	20.71	1.29	0.06	100.84
T707	30	94BCW3138	till	0.5-0.84	green	Cr-Diopside	53.92	0.14	1.36	1.25	2.76	0.08	18.39	20.68	1.11	0.05	99.74
T707	24	94BCW3138	till	0.5-0.84	green	Cr-Diopside	54.72	0.21	1.71	1.38	2.57	0.13	17.67	20.06	1.34	0.05	99.81
T707	31	94BCW3138	till	0.5-0.84	green	Cr-Diopside	53.89	0.22	1.81	1.42	2.80	0.13	17.58	19.92	1.67	0.04	99.48
T689	60	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.93	0.26	1.35	1.52	2.42	0.11	17.16	20.11	1.43	0.04	97.33
T689	62	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.70	0.25	1.12	1.54	2.33	0.09	16.99	21.13	1.21	0.04	98.39
T689	45	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.88	0.21	0.70	1.56	2.28	0.07	17.25	22.12	1.04	0.03	99.14
T689	85	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	51.99	0.23	1.24	1.59	2.47	0.08	16.34	20.26	1.12	0.05	95.34
T689	14	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	51.78	0.02	1.29	1.63	2.46	0.12	18.32	19.65	1.20	0.06	96.53
T689	59	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.67	0.17	1.45	1.68	2.56	0.11	16.57	20.00	1.51	0.03	96.75
T689	64	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.00	0.29	1.43	1.79	2.57	0.10	16.70	20.06	1.58	0.04	97.55
T689	36	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.36	0.23	0.40	2.02	2.13	0.05	16.41	22.13	1.12	0.04	97.88
T689	98	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.00	0.18	1.36	2.03	3.41	0.10	16.04	19.78	1.68	0.05	97.63
T689	121	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.76	0.23	1.32	2.09	2.52	0.11	16.43	20.48	1.62	0.05	98.60
T689	47	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.87	0.18	1.42	2.14	2.21	0.07	16.72	20.53	1.56	0.04	98.75
T689	95	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.33	0.22	1.09	2.15	1.83	0.04	17.07	20.39	1.20	0.12	97.44
T689	65	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.96	0.24	1.30	2.15	2.31	0.09	16.84	20.28	1.60	0.05	97.80
T689	75	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.57	0.18	1.59	2.15	2.37	0.13	17.42	19.19	1.57	0.07	98.22

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T689	105	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.60	0.22	1.18	2.15	2.42	0.08	16.61	20.14	1.64	0.04	98.07
T689	115	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.34	0.18	1.54	2.24	2.77	0.13	16.68	19.32	1.76	0.05	98.01
T689	89	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.06	0.03	2.42	2.25	2.08	0.12	15.52	19.51	2.31	0.01	97.30
T689	49	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.34	0.31	1.28	2.32	1.89	0.08	16.71	19.79	1.44	0.06	96.22
T689	53	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.52	0.21	1.98	2.33	2.50	0.12	16.45	18.66	2.03	0.02	97.81
T689	58	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	54.23	0.16	2.08	2.44	2.36	0.10	16.20	18.60	2.14	0.02	98.32
T689	69	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.45	0.12	1.43	2.49	2.45	0.08	16.16	19.50	1.97	0.03	96.68
T689	34	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.89	0.27	0.83	2.61	1.90	0.11	16.66	21.55	1.37	0.04	98.22
T689	111	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	54.14	0.28	1.54	2.65	2.46	0.14	16.61	19.24	1.88	0.06	98.99
T689	25	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.75	0.20	1.14	2.68	2.20	0.12	16.22	20.28	1.51	0.07	97.18
T689	28	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.25	0.19	1.41	2.71	2.30	0.07	16.21	20.06	1.49	0.06	97.74
T689	29	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.64	0.04	1.69	2.82	2.24	0.08	16.58	18.98	2.13	0.05	98.24
T689	87	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.74	0.15	1.62	2.90	2.61	0.10	16.41	18.61	2.16	0.05	98.34
T689	81	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	52.25	0.20	2.00	2.91	2.22	0.11	16.24	18.23	2.25	0.04	96.43
T689	101	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	51.69	0.18	1.17	3.06	2.53	0.15	14.92	19.15	1.62	0.13	94.61
T689	50	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.55	0.00	1.44	3.16	1.97	0.10	16.69	19.42	1.95	0.01	98.28
T689	72	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.48	0.01	1.04	3.50	2.02	0.11	16.06	19.33	2.00	0.04	97.59
T689	55	94BCW3138	till	0.25-0.5	green	HiCr-Diopside	53.84	0.10	1.02	3.70	2.01	0.13	16.13	19.02	1.98	0.05	97.97
T707	27	94BCW3138	till	0.5-0.84	green	HiCr-Diopside	56.03	0.22	1.33	0.93	2.77	0.09	17.72	20.96	1.11	0.08	101.22
T707	32	94BCW3138	till	0.5-0.84	green	HiCr-Diopside	54.00	0.20	0.78	1.63	2.33	0.05	17.86	22.67	1.08	0.04	100.63
T707	22	94BCW3138	till	0.5-0.84	green	HiCr-Diopside	54.71	0.18	1.38	1.65	2.44	0.11	17.81	20.77	1.28	0.07	100.40
T707	26	94BCW3138	till	0.5-0.84	green	HiCr-Diopside	54.49	0.18	0.86	1.99	2.20	0.09	17.31	21.87	1.25	0.01	100.24
T707	19	94BCW3138	till	0.5-0.84	green	HiCr-Diopside	54.16	0.28	1.94	2.86	2.62	0.16	16.62	18.36	2.31	0.03	99.34
T666	108	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.93	0.27	2.01	0.52	3.41	0.08	17.42	21.17	1.69	0.04	100.54
T666	134	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.49	0.16	0.86	0.63	2.84	0.08	17.81	22.93	1.02	0.03	100.85
T666	126	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.53	0.22	1.21	0.69	2.36	0.11	17.90	22.05	1.28	0.02	100.38
T666	159	94BCW3147	till	0.25-0.5	green	Cr-Diopside	52.38	0.29	2.36	0.71	3.53	0.05	17.51	23.29	0.31	0.01	100.43
T666	133	94BCW3147	till	0.25-0.5	green	Cr-Diopside	57.89	0.22	1.53	0.76	2.25	0.11	18.91	18.94	1.42	0.04	102.08
T666	160	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.04	0.22	1.44	0.87	3.10	0.16	18.49	20.83	1.22	0.04	100.41
T666	118	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.34	0.10	1.33	0.99	2.64	0.08	18.03	21.59	1.15	0.08	99.34
T666	153	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.26	0.14	1.52	1.03	2.85	0.11	18.54	20.32	1.31	0.08	100.15
T666	139	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.24	0.07	1.32	1.05	2.66	0.14	18.39	21.11	1.22	0.06	100.27
T666	150	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.19	0.15	1.42	1.07	2.75	0.10	18.06	21.01	1.30	0.06	100.11
T666	144	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.22	0.10	1.20	1.10	2.73	0.13	18.56	20.95	1.20	0.08	100.26
T666	107	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.16	0.13	1.45	1.11	2.60	0.08	18.63	21.09	1.31	0.02	100.56
T666	127	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.68	0.12	1.39	1.12	2.62	0.16	18.35	21.09	1.25	0.06	99.84
T666	124	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.74	0.32	1.26	1.14	2.55	0.13	18.55	21.26	0.80	0.78	100.54
T666	138	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.52	0.16	1.67	1.15	2.59	0.09	17.87	20.99	1.52	0.05	100.61
T666	141	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.50	0.13	1.44	1.16	2.68	0.05	17.68	21.33	1.24	0.06	99.27
T666	137	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.98	0.08	1.50	1.18	2.63	0.11	18.33	20.75	1.49	0.08	100.13

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	136	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.82	0.14	1.61	1.18	2.60	0.11	18.13	20.80	1.48	0.07	99.92
T666	119	94BCW3147	till	0.25-0.5	green	Cr-Diopside	55.11	0.16	1.91	1.18	2.68	0.13	18.08	20.05	1.52	0.04	100.85
T666	132	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.70	0.10	1.26	1.19	2.70	0.10	18.60	20.81	1.19	0.07	99.72
T666	154	94BCW3147	till	0.25-0.5	green	Cr-Diopside	56.00	0.22	1.43	1.20	2.61	0.12	18.70	21.95	1.41	0.03	103.66
T666	151	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.84	0.10	1.57	1.22	2.54	0.08	18.03	21.24	1.37	0.06	100.03
T666	149	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.72	0.11	1.57	1.23	2.52	0.08	17.93	20.73	1.51	0.08	99.48
T666	115	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.04	0.19	2.32	1.23	2.75	0.11	17.07	19.26	2.03	0.04	98.04
T666	143	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.99	0.19	1.69	1.26	2.63	0.11	17.63	20.96	1.58	0.05	100.09
T666	156	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.41	0.19	1.69	1.26	2.52	0.09	17.90	20.81	1.48	0.06	100.39
T666	116	94BCW3147	till	0.25-0.5	green	Cr-Diopside	55.13	0.21	1.70	1.26	2.52	0.07	17.96	20.76	1.47	0.03	101.11
T666	113	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.55	0.11	1.63	1.27	2.50	0.06	17.70	21.38	1.31	0.07	99.58
T666	129	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.01	0.16	1.56	1.29	2.52	0.10	18.02	20.99	1.49	0.05	100.19
T666	117	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.01	0.14	1.66	1.30	2.67	0.10	18.21	19.97	1.56	0.06	99.68
T666	140	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.24	0.15	1.63	1.32	2.71	0.12	17.96	20.75	1.49	0.05	100.41
T666	112	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.56	0.21	1.35	1.35	2.53	0.13	17.63	21.77	1.36	0.05	99.93
T666	135	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.93	0.16	1.67	1.38	2.53	0.11	17.67	20.89	1.58	0.05	99.97
T666	142	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.88	0.17	1.68	1.39	2.73	0.13	18.07	20.09	1.57	0.05	99.76
T666	122	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.10	0.19	1.66	1.39	2.80	0.09	18.09	19.90	1.64	0.05	99.90
T666	109	94BCW3147	till	0.25-0.5	green	Cr-Diopside	53.95	0.21	1.43	1.41	2.35	0.12	17.80	21.47	1.41	0.06	100.20
T666	158	94BCW3147	till	0.25-0.5	green	Cr-Diopside	54.16	0.07	1.45	1.48	2.45	0.13	18.08	21.38	1.29	0.08	100.57
T707	43	94BCW3147	till	0.5-0.84	green	Cr-Diopside	54.97	0.31	1.70	0.98	2.97	0.11	17.75	19.91	1.60	0.03	100.32
T707	48	94BCW3147	till	0.5-0.84	green	Cr-Diopside	53.40	0.11	1.63	1.09	2.82	0.10	18.20	19.92	1.11	0.05	98.42
T707	44	94BCW3147	till	0.5-0.84	green	Cr-Diopside	54.83	0.10	1.29	1.20	2.62	0.11	18.20	20.42	1.13	0.06	99.96
T707	51	94BCW3147	till	0.5-0.84	green	Cr-Diopside	54.23	0.07	1.61	1.28	2.55	0.08	17.96	20.19	1.30	0.06	99.33
T707	50	94BCW3147	till	0.5-0.84	green	Cr-Diopside	54.72	0.22	1.66	1.35	2.68	0.07	17.45	20.76	1.35	0.03	100.28
T666	145	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.30	0.20	1.66	1.50	2.48	0.12	17.74	20.81	1.68	0.05	100.55
T666	104	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.63	0.18	1.68	1.51	2.42	0.12	17.96	21.00	1.63	0.05	101.18
T666	148	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.21	0.23	1.22	1.57	2.37	0.09	17.23	21.83	1.58	0.02	100.34
T666	130	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	53.75	0.18	1.45	1.65	2.81	0.12	17.06	21.02	1.72	0.03	99.79
T666	101	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	51.65	0.24	1.08	1.71	2.39	0.08	16.80	21.13	1.90	0.12	97.10
T666	105	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	55.01	0.07	0.49	1.76	2.06	0.11	18.14	22.37	1.51	0.00	101.52
T666	152	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.73	0.27	1.45	1.77	2.42	0.07	17.39	21.16	1.81	0.03	101.13
T666	146	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.54	0.10	0.83	1.79	1.81	0.11	17.86	21.94	1.42	0.03	100.42
T666	102	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.14	0.27	1.39	1.82	2.37	0.11	17.31	20.95	1.79	0.05	100.21
T666	123	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.58	0.05	1.32	1.84	2.49	0.12	18.85	19.99	1.58	0.07	100.88
T666	106	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	53.74	0.25	1.40	1.86	2.35	0.07	17.11	20.97	1.78	0.02	99.55
T666	147	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	53.97	0.22	1.36	1.86	2.44	0.12	17.00	21.12	1.77	0.04	99.89
T666	120	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.14	0.20	0.81	1.93	2.09	0.10	17.31	22.38	1.31	0.04	100.32
T666	114	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.34	0.31	1.73	2.06	2.53	0.11	17.43	20.23	1.97	0.06	100.76
T666	125	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.68	0.19	1.95	2.06	2.67	0.09	17.66	19.66	2.14	0.05	101.14

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	155	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	52.72	0.16	2.11	2.28	2.38	0.09	15.02	17.37	2.30	0.03	94.47
T666	103	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.31	0.18	1.39	2.44	2.25	0.08	17.24	21.14	1.78	0.07	100.86
T666	111	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	53.71	0.24	1.44	2.49	2.34	0.11	16.87	20.84	1.98	0.05	100.06
T666	110	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	55.36	0.28	1.68	2.53	2.63	0.12	17.92	19.47	2.23	0.03	102.25
T666	128	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.17	0.23	1.83	2.65	2.70	0.12	17.03	19.66	2.23	0.08	100.69
T666	131	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.21	0.15	1.74	3.40	2.41	0.13	16.74	18.81	2.51	0.05	100.14
T666	121	94BCW3147	till	0.25-0.5	green	HiCr-Diopside	54.16	0.25	2.06	3.44	2.39	0.11	16.21	18.47	2.99	0.02	100.10
T707	49	94BCW3147	till	0.5-0.84	green	HiCr-Diopside	54.47	0.06	1.69	1.86	2.49	0.11	17.44	20.05	1.57	0.03	99.77
T707	46	94BCW3147	till	0.5-0.84	green	HiCr-Diopside	54.41	0.24	1.76	1.94	2.64	0.10	17.14	19.85	1.80	0.05	99.91
T707	47	94BCW3147	till	0.5-0.84	green	HiCr-Diopside	54.34	0.20	1.44	2.60	2.12	0.11	17.05	20.32	1.68	0.05	99.91
T707	45	94BCW3147	till	0.5-0.84	green	HiCr-Diopside	55.44	0.14	1.23	2.69	2.25	0.15	16.74	20.20	1.87	0.01	100.73
T690	94	94BCW3156	till	0.25-0.5	green	Cr-Diopside	52.70	0.21	1.49	0.74	2.87	0.17	17.76	21.00	1.07	0.04	98.02
T690	77	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.12	0.24	1.37	0.85	2.53	0.12	17.57	20.75	1.00	0.05	98.59
T690	92	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.71	0.25	1.43	0.86	2.94	0.14	17.09	20.54	1.18	0.05	98.18
T690	86	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.45	0.18	1.09	0.97	2.47	0.08	17.36	21.28	1.02	0.04	97.93
T690	119	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.56	0.18	1.82	1.08	2.51	0.06	17.95	20.12	1.25	0.05	98.57
T690	115	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.30	0.12	1.36	1.08	2.62	0.10	17.61	20.70	1.03	0.05	97.99
T690	89	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.24	0.10	1.64	1.10	2.30	0.10	17.96	20.13	1.35	0.03	97.93
T690	117	94BCW3156	till	0.25-0.5	green	Cr-Diopside	52.56	0.13	1.30	1.10	2.60	0.07	17.38	20.45	1.02	0.09	96.69
T690	78	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.02	0.10	0.96	1.10	2.43	0.11	17.71	21.24	1.02	0.05	98.74
T690	76	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.29	0.18	1.63	1.12	2.76	0.09	18.11	19.83	1.31	0.05	98.37
T690	116	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.68	0.20	1.51	1.14	2.42	0.13	17.56	19.97	1.27	0.06	97.94
T690	118	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.05	0.06	1.35	1.15	2.65	0.06	17.85	20.73	1.06	0.06	98.01
T690	110	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.56	0.16	1.35	1.17	2.49	0.12	17.45	21.08	1.05	0.05	98.48
T690	88	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.44	0.20	1.55	1.17	2.60	0.09	17.10	20.26	1.31	0.05	97.77
T690	72	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.73	0.24	1.41	1.19	2.57	0.13	17.12	20.81	1.37	0.02	99.59
T690	93	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.71	0.14	1.61	1.21	2.53	0.11	17.70	20.47	1.31	0.05	98.84
T690	61	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.20	0.10	0.50	1.22	1.77	0.07	17.27	22.67	0.80	0.01	98.60
T690	106	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.32	0.09	0.86	1.22	2.38	0.08	17.36	21.94	1.00	0.02	98.27
T690	107	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.92	0.22	1.65	1.23	2.81	0.11	17.88	19.50	1.35	0.04	98.71
T690	68	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.02	0.12	1.44	1.24	2.61	0.09	18.12	20.38	1.17	0.09	99.28
T690	87	94BCW3156	till	0.25-0.5	green	Cr-Diopside	52.45	0.09	1.57	1.25	2.72	0.07	16.83	20.01	1.32	0.07	96.36
T690	102	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.52	0.10	1.64	1.25	2.71	0.15	17.52	20.08	1.32	0.05	98.34
T690	73	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.03	0.14	1.63	1.26	2.54	0.09	17.80	20.76	1.31	0.05	98.62
T690	60	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.28	0.13	0.59	1.29	1.71	0.06	17.31	22.88	0.85	0.01	98.11
T690	75	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.73	0.10	1.67	1.31	2.48	0.09	17.23	21.07	1.31	0.05	99.03
T690	80	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.32	0.09	1.38	1.31	2.56	0.13	17.74	19.94	1.15	0.05	98.68
T690	111	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.03	0.14	1.62	1.32	2.54	0.11	17.24	20.26	1.37	0.07	98.70
T690	96	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.06	0.21	1.65	1.33	2.58	0.08	17.53	19.80	1.38	0.06	97.67
T690	100	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.33	0.12	1.55	1.35	2.61	0.07	17.16	20.03	1.32	0.04	97.59

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T690	108	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.82	0.15	2.08	1.37	2.50	0.09	17.31	19.18	1.79	0.02	98.31
T690	85	94BCW3156	till	0.25-0.5	green	Cr-Diopside	52.09	0.29	1.55	1.39	2.97	0.13	16.10	19.75	1.81	0.06	96.14
T690	90	94BCW3156	till	0.25-0.5	green	Cr-Diopside	53.88	0.01	0.36	1.42	1.76	0.08	17.39	23.09	0.81	0.01	98.81
T690	71	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.56	0.20	0.94	1.46	2.40	0.07	16.77	21.83	1.14	0.06	99.42
T690	98	94BCW3156	till	0.25-0.5	green	Cr-Diopside	54.14	0.12	1.70	1.46	2.56	0.09	17.46	20.01	1.48	0.05	99.08
T690	83	94BCW3156	till	0.25-0.5	green	Cr-Diopside	51.79	0.13	0.50	1.48	1.81	0.09	16.91	22.18	0.79	0.01	95.68
T707	70	94BCW3156	till	0.5-0.84	green	Cr-Diopside	55.19	0.22	1.85	0.78	2.95	0.15	17.64	19.68	1.54	0.03	100.03
T707	69	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.53	0.09	1.31	1.07	2.78	0.12	18.73	20.62	1.05	0.06	100.35
T707	88	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.79	0.11	1.20	1.10	2.76	0.09	18.44	20.71	1.02	0.06	100.27
T707	75	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.81	0.22	1.35	1.10	2.70	0.07	18.05	21.65	1.10	0.05	101.11
T707	84	94BCW3156	till	0.5-0.84	green	Cr-Diopside	53.93	0.08	1.24	1.13	2.68	0.12	18.42	20.51	1.05	0.08	99.22
T707	91	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.37	0.17	1.35	1.18	2.95	0.11	17.51	20.74	1.22	0.04	99.62
T707	77	94BCW3156	till	0.5-0.84	green	Cr-Diopside	53.69	0.11	1.36	1.19	2.60	0.09	17.94	21.09	1.10	0.06	99.20
T707	79	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.31	0.12	1.58	1.27	2.69	0.13	17.80	20.07	1.28	0.04	99.27
T707	83	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.10	0.11	1.54	1.27	2.59	0.13	17.88	20.31	1.32	0.04	99.27
T707	85	94BCW3156	till	0.5-0.84	green	Cr-Diopside	53.65	0.18	1.69	1.28	2.68	0.13	18.17	19.91	1.40	0.03	99.11
T707	74	94BCW3156	till	0.5-0.84	green	Cr-Diopside	53.63	0.19	1.64	1.32	2.57	0.11	17.61	20.65	1.34	0.05	99.11
T707	78	94BCW3156	till	0.5-0.84	green	Cr-Diopside	55.62	0.22	1.65	1.36	2.93	0.10	17.48	20.32	1.68	0.03	101.38
T707	72	94BCW3156	till	0.5-0.84	green	Cr-Diopside	53.13	0.22	1.59	1.37	2.53	0.09	17.01	20.20	1.85	0.36	98.35
T707	81	94BCW3156	till	0.5-0.84	green	Cr-Diopside	54.08	0.23	1.67	1.37	2.50	0.08	17.33	20.63	1.37	0.04	99.29
T690	99	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.27	0.08	1.41	1.52	2.59	0.15	17.72	20.46	1.19	0.07	99.45
T690	91	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.39	0.30	1.75	1.52	2.69	0.17	16.84	19.59	1.64	0.02	97.90
T690	84	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.41	0.18	0.98	1.55	2.29	0.12	16.97	20.93	1.12	0.04	97.58
T690	67	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.96	0.13	1.39	1.55	2.45	0.07	17.29	20.75	1.19	0.06	98.83
T690	112	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	52.62	0.11	1.69	1.59	2.86	0.10	16.65	19.62	1.60	0.05	96.89
T690	81	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.45	0.33	1.68	1.67	2.79	0.11	17.03	19.33	1.96	0.29	98.63
T690	66	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.84	0.22	1.53	1.69	2.72	0.10	17.09	19.50	1.66	0.03	98.37
T690	113	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.11	0.20	1.18	1.77	2.38	0.08	16.89	20.96	1.34	0.04	98.95
T690	95	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	52.97	0.25	1.58	1.92	2.63	0.11	17.01	19.70	1.76	0.04	97.96
T690	64	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.43	0.07	0.24	1.97	1.71	0.06	17.15	22.64	1.08	0.00	99.34
T690	97	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.37	0.06	2.30	2.05	2.48	0.08	16.59	18.37	2.35	0.05	97.70
T690	63	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.02	0.24	1.29	2.06	2.27	0.14	16.60	20.46	1.59	0.05	97.71
T690	82	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.76	0.30	1.27	2.09	2.31	0.10	16.61	20.44	1.65	0.03	98.56
T690	114	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.65	0.00	1.31	2.16	1.77	0.07	17.63	20.25	1.53	0.05	98.41
T690	101	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.09	0.16	0.80	2.17	2.08	0.13	17.95	20.48	1.39	0.12	99.35
T690	69	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	52.91	0.16	1.43	2.18	2.06	0.10	17.06	19.88	1.56	0.04	97.38
T690	104	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.43	0.08	1.69	2.18	2.60	0.09	17.23	19.91	1.60	0.07	98.87
T690	109	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.09	0.20	1.62	2.26	2.52	0.14	16.52	19.56	1.88	0.04	98.81
T690	74	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.49	0.20	1.34	2.34	2.34	0.09	16.91	20.20	1.67	0.04	98.61
T690	62	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.98	0.14	1.04	2.56	1.85	0.12	17.26	20.64	1.56	0.03	99.17

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T690	103	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.29	0.20	1.24	2.56	1.88	0.12	17.06	20.48	1.59	0.05	99.49
T690	70	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.32	0.25	1.25	2.60	2.26	0.11	17.36	19.11	1.76	0.05	98.06
T690	65	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	54.25	0.20	1.73	3.62	2.38	0.08	16.17	18.34	2.28	0.03	99.09
T690	105	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.41	0.27	1.29	3.85	2.49	0.13	16.07	18.39	2.24	0.06	98.20
T690	79	94BCW3156	till	0.25-0.5	green	HiCr-Diopside	53.46	0.16	1.21	3.95	2.00	0.14	16.89	18.52	2.21	0.07	98.60
T707	87	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	53.32	0.15	1.70	1.61	2.52	0.12	17.31	20.25	1.54	0.05	98.56
T707	82	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	55.13	0.25	1.71	1.85	2.45	0.12	17.39	20.33	1.58	0.05	100.87
T707	90	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	53.88	0.23	1.31	2.20	2.45	0.08	16.89	20.50	1.73	0.09	99.37
T707	89	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	53.25	0.25	1.64	2.21	2.60	0.12	16.81	19.92	1.84	0.05	98.68
T707	73	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	54.58	0.08	0.61	2.28	2.08	0.10	17.08	21.60	1.44	0.03	99.89
T707	71	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	54.67	0.05	1.21	2.53	1.83	0.08	17.02	20.70	1.58	0.00	99.68
T707	76	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	53.62	0.24	2.03	2.55	2.63	0.12	16.49	18.57	2.20	0.02	98.46
T707	80	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	54.26	0.14	1.57	2.86	2.57	0.13	16.79	18.85	2.11	0.06	99.33
T707	68	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	54.68	0.16	0.74	3.43	2.10	0.10	17.14	19.68	1.97	0.04	100.05
T707	86	94BCW3156	till	0.5-0.84	green	HiCr-Diopside	53.80	0.25	1.13	3.65	2.48	0.11	16.16	18.08	2.02	0.05	97.72
T667	124	94BCW3166	till	0.25-0.5	green	Cr-Diopside	53.68	0.16	1.53	0.72	6.07	0.16	16.41	21.40	0.48	0.00	100.59
T667	136	94BCW3166	till	0.25-0.5	green	Cr-Diopside	55.13	0.15	0.82	1.02	2.68	0.11	17.82	22.81	0.92	0.02	101.49
T667	132	94BCW3166	till	0.25-0.5	green	Cr-Diopside	54.89	0.14	1.64	1.04	2.50	0.13	18.16	20.55	1.25	0.06	100.37
T667	135	94BCW3166	till	0.25-0.5	green	Cr-Diopside	55.26	0.11	1.27	1.19	2.71	0.09	18.40	21.00	1.03	0.06	101.12
T667	122	94BCW3166	till	0.25-0.5	green	Cr-Diopside	55.54	0.16	1.70	1.25	2.59	0.08	17.78	21.44	1.35	0.05	101.93
T667	123	94BCW3166	till	0.25-0.5	green	Cr-Diopside	54.96	0.14	1.62	1.31	2.63	0.08	17.77	20.79	1.32	0.05	100.66
T667	131	94BCW3166	till	0.25-0.5	green	Cr-Diopside	55.31	0.27	1.64	1.47	2.78	0.10	17.33	20.58	1.64	0.06	101.17
T707	103	94BCW3166	till	0.5-0.84	green	Cr-Diopside	54.79	0.18	1.43	0.98	2.66	0.10	18.19	20.99	1.15	0.05	100.51
T707	101	94BCW3166	till	0.5-0.84	green	Cr-Diopside	52.95	0.28	1.21	1.06	2.50	0.09	17.38	21.53	1.24	0.05	98.28
T707	106	94BCW3166	till	0.5-0.84	green	Cr-Diopside	53.64	0.20	1.50	1.06	2.84	0.09	17.99	20.41	1.24	0.05	99.01
T707	104	94BCW3166	till	0.5-0.84	green	Cr-Diopside	53.48	0.22	0.40	1.28	2.41	0.12	17.90	22.92	0.76	0.01	99.48
T707	107	94BCW3166	till	0.5-0.84	green	Cr-Diopside	53.28	0.20	1.63	1.31	2.62	0.08	17.82	20.69	1.37	0.06	99.07
T707	100	94BCW3166	till	0.5-0.84	green	Cr-Diopside	53.91	0.22	1.23	1.40	2.37	0.09	17.61	21.48	1.16	0.07	99.53
T667	126	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	54.99	0.12	0.41	1.68	1.86	0.05	17.55	23.30	0.98	0.01	100.95
T667	133	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	54.90	0.24	1.23	1.79	2.22	0.07	17.01	21.24	1.47	0.05	100.23
T667	127	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	55.36	0.21	1.54	1.99	2.64	0.11	17.09	20.53	1.69	0.06	101.22
T667	129	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	55.21	0.12	1.43	2.07	2.70	0.07	16.96	21.02	1.52	0.03	101.13
T667	128	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	54.51	0.24	1.63	2.27	2.65	0.10	16.89	19.97	1.83	0.04	100.15
T667	130	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	55.77	0.19	1.07	2.32	2.63	0.12	17.19	21.60	1.45	0.06	102.40
T667	134	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	54.67	0.23	1.65	2.46	2.46	0.08	16.92	20.09	1.88	0.05	100.50
T667	125	94BCW3166	till	0.25-0.5	green	HiCr-Diopside	55.16	0.19	1.23	2.57	2.46	0.09	16.84	21.23	1.53	0.07	101.36
T707	105	94BCW3166	till	0.5-0.84	green	HiCr-Diopside	52.63	0.14	1.19	1.70	2.39	0.08	16.93	20.89	0.88	0.06	96.89
T707	102	94BCW3166	till	0.5-0.84	green	HiCr-Diopside	54.29	0.27	1.45	2.15	2.37	0.10	17.34	19.64	1.62	0.07	99.28
T691	13	94BCW3171	till	0.25-0.5	green	Diopside	53.08	0.07	1.26	0.45	4.56	0.15	16.87	22.58	0.36	0.00	99.38
T668	44	94BCW3172	till	0.25-0.5	green	Cr-Diopside	51.34	0.13	2.61	0.81	3.42	0.14	16.82	23.07	0.37	0.01	98.72

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T668	45	94BCW3172	till	0.25-0.5	green	Diopside	52.81	0.03	0.46	0.02	4.80	0.15	15.84	24.77	0.31	0.00	99.19
T668	46	94BCW3172	till	0.25-0.5	green	Diopside	50.96	0.06	0.89	0.10	5.29	0.21	15.50	24.26	0.43	0.00	97.70
T668	47	94BCW3172	till	0.25-0.5	green	Diopside	52.47	0.14	1.96	0.46	4.86	0.14	16.52	22.75	0.40	0.02	99.73
T668	131	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.39	0.23	1.49	0.93	2.94	0.10	17.44	21.41	1.12	0.04	99.08
T668	133	94BCW3178	till	0.25-0.5	green	Cr-Diopside	52.75	0.15	1.42	1.00	2.37	0.10	17.95	20.92	1.11	0.04	97.80
T668	130	94BCW3178	till	0.25-0.5	green	Cr-Diopside	52.24	0.25	1.58	1.05	3.07	0.12	17.37	20.88	1.19	0.08	97.82
T668	128	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.31	0.08	1.53	1.09	2.51	0.16	17.73	21.06	1.16	0.06	98.68
T668	137	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.10	0.13	1.59	1.12	2.63	0.15	17.81	20.71	1.27	0.07	98.57
T668	125	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.37	0.14	1.62	1.20	2.52	0.05	17.70	20.81	1.27	0.06	98.75
T668	134	94BCW3178	till	0.25-0.5	green	Cr-Diopside	52.86	0.17	0.85	1.24	2.34	0.06	17.21	22.36	1.04	0.06	98.18
T668	124	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.82	0.16	1.72	1.25	2.66	0.07	18.12	19.97	1.35	0.06	99.18
T668	126	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.09	0.14	0.88	1.40	2.43	0.15	17.25	22.15	1.04	0.08	98.60
T668	132	94BCW3178	till	0.25-0.5	green	Cr-Diopside	53.29	0.06	1.61	1.45	2.36	0.11	17.92	19.91	1.35	0.05	98.10
T708	11	94BCW3178	till	0.5-0.84	green	Cr-Diopside	53.40	0.17	1.36	0.91	2.63	0.18	18.01	20.94	0.99	0.05	98.63
T708	14	94BCW3178	till	0.5-0.84	green	Cr-Diopside	53.60	0.24	1.48	1.04	2.44	0.09	17.28	21.24	1.14	0.06	98.62
T708	13	94BCW3178	till	0.5-0.84	green	Cr-Diopside	54.80	0.34	1.89	1.10	2.86	0.13	16.92	19.55	1.62	0.03	99.23
T708	7	94BCW3178	till	0.5-0.84	green	Cr-Diopside	54.39	0.19	1.49	1.18	2.60	0.09	17.56	20.68	1.17	0.05	99.39
T708	6	94BCW3178	till	0.5-0.84	green	Cr-Diopside	54.07	0.17	1.53	1.26	2.57	0.08	17.61	20.32	1.31	0.05	98.97
T708	5	94BCW3178	till	0.5-0.84	green	Cr-Diopside	53.47	0.10	1.50	1.33	2.48	0.07	17.60	19.98	1.31	0.05	97.89
T708	8	94BCW3178	till	0.5-0.84	green	Cr-Diopside	54.81	0.29	1.29	1.47	2.38	0.08	17.29	20.96	1.17	0.05	99.79
T668	141	94BCW3178	till	0.25-0.5	green	Diopside	51.29	0.09	0.95	0.02	5.38	0.25	14.90	23.95	0.47	0.01	97.31
T668	138	94BCW3178	till	0.25-0.5	green	Diopside	51.19	0.11	1.46	0.03	4.88	0.13	15.68	24.09	0.49	0.00	98.05
T668	140	94BCW3178	till	0.25-0.5	green	Diopside	52.38	0.09	1.20	0.04	4.13	0.11	16.17	24.55	0.41	0.01	99.09
T668	139	94BCW3178	till	0.25-0.5	green	Diopside	51.17	0.07	0.88	0.05	6.04	0.15	14.33	24.41	0.35	0.00	97.45
T668	143	94BCW3178	till	0.25-0.5	green	Diopside	51.87	0.06	0.91	0.07	4.61	0.18	16.00	24.31	0.40	0.03	98.43
T668	142	94BCW3178	till	0.25-0.5	green	Diopside	51.72	0.08	1.16	0.08	4.48	0.18	15.70	24.32	0.44	0.00	98.15
T668	136	94BCW3178	till	0.25-0.5	green	Diopside	51.05	0.11	1.60	0.13	4.26	0.11	15.63	23.81	0.47	0.00	97.17
T668	129	94BCW3178	till	0.25-0.5	green	HiCr-Diopside	53.36	0.20	1.18	1.64	2.41	0.09	16.92	21.59	1.21	0.03	98.63
T668	135	94BCW3178	till	0.25-0.5	green	HiCr-Diopside	52.64	0.27	1.65	2.07	2.66	0.12	16.41	20.02	1.80	0.04	97.67
T668	127	94BCW3178	till	0.25-0.5	green	HiCr-Diopside	53.53	0.23	1.39	2.46	2.41	0.13	16.62	20.45	1.72	0.04	98.98
T708	12	94BCW3178	till	0.5-0.84	green	HiCr-Diopside	53.82	0.22	1.23	1.50	2.46	0.07	17.18	21.03	1.17	0.06	98.74
T708	9	94BCW3178	till	0.5-0.84	green	HiCr-Diopside	54.51	0.26	1.59	1.60	2.50	0.07	17.27	20.16	1.49	0.06	99.51
T692	4	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.47	0.33	2.74	0.56	2.99	0.08	17.18	19.33	1.99	0.03	99.69
T692	20	94BCW3187	till	0.25-0.5	green	Cr-Diopside	53.92	0.06	1.80	0.65	4.66	0.15	16.44	22.23	0.77	0.01	100.69
T692	16	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.85	0.31	1.80	0.88	2.77	0.11	17.32	20.34	1.54	0.02	99.93
T692	24	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.65	0.22	1.23	0.93	2.93	0.08	18.12	21.29	0.96	0.02	100.43
T692	59	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.70	0.14	2.12	0.95	2.72	0.13	17.34	20.05	1.74	0.00	99.89
T692	28	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.16	0.15	0.90	1.00	2.52	0.11	17.41	22.71	0.97	0.03	100.96
T692	19	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.22	0.18	1.49	1.01	2.88	0.11	17.43	21.09	1.20	0.05	99.66
T692	54	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.79	0.20	1.48	1.03	2.66	0.13	17.87	20.88	1.17	0.06	100.26

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T692	47	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.83	0.03	1.27	1.09	2.62	0.11	18.03	21.42	1.07	0.05	100.51
T692	31	94BCW3187	till	0.25-0.5	green	Cr-Diopside	52.47	0.12	1.68	1.10	5.35	0.04	17.04	19.63	0.95	0.06	98.43
T692	48	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.86	0.05	1.36	1.10	2.69	0.14	17.68	21.51	1.11	0.05	100.56
T692	26	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.62	0.09	1.62	1.10	2.78	0.10	18.28	20.31	1.38	0.03	100.31
T692	3	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.02	0.09	1.31	1.11	2.66	0.15	18.04	21.01	1.08	0.05	100.51
T692	33	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.16	0.10	1.25	1.11	2.78	0.11	18.34	20.76	1.06	0.06	100.71
T692	25	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.34	0.17	1.38	1.12	2.90	0.14	18.53	20.08	1.09	0.06	100.80
T692	43	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.62	0.01	1.30	1.14	2.67	0.12	18.34	20.90	1.09	0.07	100.28
T692	23	94BCW3187	till	0.25-0.5	green	Cr-Diopside	56.15	0.00	1.41	1.15	2.58	0.08	18.16	21.18	1.07	0.05	101.83
T692	34	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.81	0.17	1.35	1.18	2.70	0.12	17.89	21.54	1.05	0.05	100.86
T692	10	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.90	0.21	1.61	1.19	2.69	0.08	17.75	20.45	1.29	0.05	100.22
T692	37	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.42	0.22	0.83	1.21	2.55	0.12	17.03	22.33	0.99	0.04	99.72
T692	53	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.13	0.03	1.19	1.24	2.88	0.06	18.24	20.73	1.10	0.10	100.68
T692	56	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.06	0.21	1.64	1.24	2.61	0.11	17.80	20.75	1.35	0.04	100.80
T692	5	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.16	0.16	1.36	1.24	2.66	0.13	17.92	20.95	1.19	0.07	100.83
T692	44	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.25	0.13	1.62	1.25	2.54	0.08	18.08	20.83	1.26	0.05	101.10
T692	9	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.20	0.21	1.66	1.27	2.63	0.03	17.68	20.67	1.33	0.05	100.72
T692	13	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.54	0.18	1.47	1.30	2.56	0.13	17.63	21.26	1.18	0.06	100.30
T692	15	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.03	0.07	1.50	1.30	2.61	0.08	17.54	20.88	1.21	0.06	99.28
T692	32	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.58	0.19	1.45	1.31	2.77	0.09	18.24	20.12	1.38	0.06	100.18
T692	35	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.05	0.21	1.28	1.31	2.59	0.10	17.04	21.75	1.22	0.04	100.59
T692	60	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.17	0.11	1.52	1.32	2.59	0.07	17.60	20.95	1.36	0.04	100.74
T692	57	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.87	0.23	1.66	1.33	2.54	0.07	17.51	20.87	1.36	0.04	100.47
T692	36	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.62	0.22	1.29	1.36	2.51	0.10	17.33	21.78	1.19	0.05	100.45
T692	8	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.65	0.18	0.90	1.38	2.36	0.08	17.26	22.32	1.10	0.04	100.26
T692	1	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.55	0.31	1.67	1.38	2.55	0.09	17.57	20.68	1.42	0.05	100.26
T692	52	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.77	0.08	1.61	1.38	2.62	0.12	17.42	20.92	1.40	0.04	100.35
T692	6	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.63	0.22	1.28	1.45	2.44	0.11	17.29	21.30	1.38	0.05	101.14
T692	38	94BCW3187	till	0.25-0.5	green	Cr-Diopside	55.26	0.15	0.44	1.46	2.30	0.13	17.31	22.27	1.14	0.03	100.49
T692	58	94BCW3187	till	0.25-0.5	green	Cr-Diopside	54.28	0.21	1.48	1.48	2.60	0.08	17.19	21.25	1.27	0.07	99.91
T708	31	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.59	0.11	0.77	0.77	2.59	0.10	17.36	22.13	0.86	0.03	98.29
T708	33	94BCW3187	till	0.5-0.84	green	Cr-Diopside	52.90	0.20	1.38	1.01	2.81	0.15	17.86	20.72	1.10	0.06	98.18
T708	47	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.58	0.12	1.12	1.06	3.07	0.09	17.77	20.09	0.95	0.06	97.91
T708	39	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.56	0.24	1.70	1.08	2.37	0.11	17.35	20.56	1.33	0.05	98.36
T708	29	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.90	0.05	1.31	1.08	2.58	0.10	17.71	20.77	1.03	0.05	98.58
T708	40	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.49	0.12	1.33	1.11	2.55	0.12	17.68	20.84	1.07	0.06	99.37
T708	45	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.31	0.08	1.28	1.15	2.64	0.11	18.21	20.57	1.06	0.05	99.45
T708	26	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.75	0.22	1.25	1.17	3.13	0.08	16.61	21.42	1.09	0.02	98.73
T708	36	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.10	0.17	1.59	1.22	2.65	0.11	17.40	20.47	1.30	0.05	98.04
T708	43	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.47	0.15	1.33	1.24	2.65	0.11	18.01	20.37	1.09	0.04	98.46

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	34	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.49	0.22	1.34	1.27	2.55	0.09	17.40	21.22	1.17	0.05	99.78
T708	30	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.09	0.07	1.66	1.32	2.60	0.07	17.51	20.11	1.25	0.05	98.73
T708	28	94BCW3187	till	0.5-0.84	green	Cr-Diopside	55.01	0.14	1.63	1.33	2.52	0.09	18.26	19.15	1.34	0.06	99.51
T708	27	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.02	0.20	0.87	1.34	2.35	0.05	17.35	21.64	1.05	0.05	98.93
T708	44	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.91	0.09	1.48	1.36	2.60	0.14	18.07	20.14	1.22	0.06	99.07
T708	32	94BCW3187	till	0.5-0.84	green	Cr-Diopside	53.09	0.18	1.63	1.39	2.40	0.11	17.47	20.16	1.40	0.05	97.87
T708	46	94BCW3187	till	0.5-0.84	green	Cr-Diopside	54.33	0.25	1.30	1.40	2.36	0.07	17.20	21.18	1.22	0.03	99.33
T692	42	94BCW3187	till	0.25-0.5	green	Diopside	53.24	0.04	1.26	0.42	5.83	0.24	15.63	22.09	0.78	0.00	99.54
T692	55	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.91	0.24	1.44	1.54	2.67	0.07	17.21	20.72	1.38	0.06	100.22
T692	29	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.77	0.12	0.36	1.54	2.01	0.09	17.55	22.84	0.95	0.02	100.25
T692	7	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.89	0.18	1.61	1.56	2.39	0.11	17.41	20.86	1.40	0.05	100.44
T692	2	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.30	0.13	1.48	1.60	2.58	0.04	17.88	20.05	1.44	0.07	99.55
T692	45	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	55.78	0.17	1.17	1.67	2.50	0.11	17.33	21.74	1.25	0.04	101.75
T692	40	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.51	0.29	1.55	1.68	2.58	0.13	16.90	20.34	1.73	0.03	99.73
T692	21	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	55.25	0.05	0.25	1.77	1.80	0.09	17.34	23.51	0.97	0.04	101.06
T692	18	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.26	0.25	1.60	1.88	2.38	0.08	17.01	20.94	1.47	0.05	99.94
T692	22	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.70	0.23	1.35	1.98	2.53	0.10	17.03	20.87	1.60	0.03	100.43
T692	46	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	53.93	0.23	1.22	2.10	2.30	0.10	16.78	21.41	1.37	0.04	99.48
T692	39	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.87	0.27	1.30	2.11	2.46	0.11	16.87	20.59	1.71	0.03	100.31
T692	14	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.85	0.10	1.70	2.13	2.61	0.10	16.87	19.96	1.68	0.05	100.06
T692	41	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	53.90	0.25	1.44	2.21	2.50	0.12	16.86	20.30	1.70	0.04	99.29
T692	11	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.81	0.08	1.97	2.32	2.62	0.09	16.84	18.93	2.13	0.03	99.83
T692	12	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.81	0.09	2.15	2.33	2.47	0.09	16.30	19.23	2.29	0.00	99.75
T692	49	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	55.18	0.24	1.62	2.46	2.68	0.11	16.81	19.82	1.91	0.06	100.91
T692	30	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.83	0.25	1.36	2.53	2.45	0.11	16.71	20.09	1.81	0.04	100.18
T692	50	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	55.40	0.01	1.58	2.55	1.86	0.09	16.97	20.29	1.78	0.00	100.53
T692	17	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.56	0.12	1.53	2.58	3.48	0.14	16.12	19.10	2.12	0.05	99.80
T692	27	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.95	0.23	1.50	2.91	2.45	0.14	17.02	19.10	2.03	0.03	100.37
T692	51	94BCW3187	till	0.25-0.5	green	HiCr-Diopside	54.49	0.04	1.77	3.39	2.08	0.09	16.46	18.77	2.36	0.04	99.49
T708	23	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.99	0.30	1.60	1.63	2.63	0.11	17.51	20.29	1.63	0.04	99.71
T708	24	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.69	0.16	1.63	1.67	2.47	0.10	17.14	20.21	1.45	0.05	98.56
T708	38	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.46	0.26	1.57	1.96	2.49	0.13	16.40	19.61	1.75	0.03	97.65
T708	25	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.58	0.26	1.33	2.20	2.39	0.10	16.91	20.30	1.66	0.05	98.78
T708	42	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.81	0.32	1.88	2.24	2.58	0.08	16.54	19.36	1.93	0.03	98.76
T708	35	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	52.91	0.20	1.13	2.33	2.28	0.05	16.56	20.61	1.48	0.05	97.61
T708	41	94BCW3187	till	0.5-0.84	green	HiCr-Diopside	53.47	0.18	1.71	2.92	2.24	0.10	16.88	18.62	2.05	0.05	98.20
T670	39	94BCW3192	till	0.25-0.5	green	Cr-Diopside	53.17	0.16	1.60	0.60	4.17	0.14	17.53	21.94	0.39	0.00	99.70
T670	54	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.54	0.20	1.57	0.94	2.38	0.13	17.67	21.32	1.20	0.05	100.00
T670	13	94BCW3192	till	0.25-0.5	green	Cr-Diopside	53.83	0.09	1.21	1.00	2.45	0.13	17.01	20.37	0.89	0.06	97.03
T670	3	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.93	0.13	1.51	1.01	2.55	0.09	18.10	21.07	1.10	0.06	100.55

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	55	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.38	0.16	1.42	1.04	2.38	0.10	17.92	21.28	1.12	0.06	99.85
T670	1	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.74	0.09	1.42	1.05	2.65	0.03	17.91	21.29	1.09	0.04	100.31
T670	15	94BCW3192	till	0.25-0.5	green	Cr-Diopside	53.89	0.12	1.26	1.06	2.40	0.12	17.81	20.95	1.02	0.08	98.71
T670	27	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.89	0.15	1.57	1.08	2.79	0.08	18.25	20.53	1.25	0.04	100.62
T670	48	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.06	0.21	1.64	1.09	2.51	0.11	17.72	20.75	1.35	0.05	99.49
T670	51	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.33	0.13	1.36	1.10	2.59	0.08	18.07	21.34	1.08	0.04	100.10
T670	36	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.38	0.12	1.41	1.10	2.44	0.07	17.71	21.16	1.12	0.06	99.55
T670	9	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.73	0.10	1.33	1.14	2.48	0.10	18.43	20.89	1.10	0.08	100.38
T670	34	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.40	0.13	1.62	1.15	2.59	0.13	17.56	20.45	1.31	0.04	99.37
T670	49	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.38	0.13	1.43	1.17	2.53	0.05	17.69	21.22	1.11	0.07	99.76
T670	32	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.36	0.29	2.18	1.18	2.60	0.08	17.42	19.65	1.77	0.02	99.54
T670	33	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.13	0.15	1.38	1.19	2.55	0.13	18.08	21.38	1.15	0.06	100.20
T670	8	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.22	0.18	1.71	1.21	2.47	0.14	17.43	20.35	1.36	0.06	99.13
T670	12	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.42	0.25	1.38	1.22	2.51	0.03	17.58	21.24	1.15	0.04	99.82
T670	11	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.21	0.19	1.71	1.22	2.50	0.12	17.57	20.64	1.35	0.03	99.54
T670	26	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.05	0.15	1.56	1.24	2.51	0.08	17.74	20.64	1.35	0.04	99.36
T670	28	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.56	0.07	1.40	1.24	2.53	0.05	17.97	20.97	1.13	0.05	99.97
T670	56	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.51	0.11	1.53	1.24	2.50	0.13	18.16	20.22	1.24	0.04	99.68
T670	14	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.26	0.15	1.58	1.26	2.43	0.10	17.57	20.66	1.30	0.04	99.33
T670	5	94BCW3192	till	0.25-0.5	emerald	Cr-Diopside	54.57	0.14	1.47	1.26	2.50	0.09	17.41	21.15	1.16	0.07	99.82
T670	23	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.82	0.16	1.69	1.27	2.54	0.08	17.76	20.52	1.31	0.06	100.20
T670	42	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.17	0.11	1.43	1.28	2.51	0.08	17.52	21.16	1.12	0.02	99.41
T670	45	94BCW3192	till	0.25-0.5	green	Cr-Diopside	53.77	0.19	1.70	1.28	2.27	0.12	17.56	20.63	1.45	0.06	99.02
T670	10	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.73	0.16	1.59	1.29	2.47	0.10	17.69	20.33	1.41	0.05	99.82
T670	7	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.63	0.20	0.88	1.30	2.21	0.08	17.42	22.19	1.00	0.03	99.92
T670	16	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.29	0.16	1.70	1.30	2.38	0.09	17.33	20.90	1.42	0.04	99.61
T670	30	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.31	0.19	1.72	1.30	2.44	0.14	17.47	20.91	1.41	0.04	99.90
T670	35	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.10	0.10	1.38	1.30	2.54	0.11	17.85	20.91	1.16	0.06	99.50
T670	21	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.27	0.21	1.75	1.31	2.68	0.11	17.68	20.10	1.50	0.07	99.68
T670	53	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.71	0.20	0.83	1.32	2.33	0.08	17.13	22.61	1.04	0.03	100.27
T670	38	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.53	0.16	1.69	1.33	2.61	0.12	17.56	20.59	1.43	0.05	100.07
T670	17	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.67	0.19	0.95	1.34	2.38	0.11	17.45	22.32	1.01	0.04	100.47
T670	4	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.50	0.17	1.73	1.36	2.53	0.12	17.39	20.29	1.38	0.05	99.51
T670	20	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.89	0.18	1.63	1.37	2.52	0.11	17.65	20.78	1.35	0.06	100.53
T670	43	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.09	0.24	1.34	1.39	2.32	0.11	17.45	21.21	1.20	0.04	99.39
T670	2	94BCW3192	till	0.25-0.5	green	Cr-Diopside	54.24	0.18	1.04	1.42	2.41	0.07	17.32	21.96	1.15	0.08	99.86
T708	79	94BCW3192	till	0.5-0.84	green	Cr-Diopside	52.18	0.30	1.84	0.56	3.04	0.09	16.91	19.18	1.05	0.08	95.23
T708	71	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.76	0.26	1.42	0.83	2.86	0.07	17.13	20.83	1.17	0.04	98.37
T708	73	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.96	0.29	1.28	1.01	2.72	0.12	18.02	20.65	1.02	0.08	99.15
T708	76	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.16	0.10	1.44	1.04	2.94	0.10	18.33	19.75	1.12	0.05	98.03

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	81	94BCW3192	till	0.5-0.84	green	Cr-Diopside	54.01	0.12	1.42	1.05	2.96	0.11	17.56	20.01	1.17	0.06	98.48
T708	72	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.46	0.32	1.64	1.09	2.73	0.12	17.01	20.14	1.51	0.04	98.06
T708	69	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.24	0.06	1.28	1.11	2.61	0.07	17.52	20.63	1.06	0.05	97.62
T708	70	94BCW3192	till	0.5-0.84	green	Cr-Diopside	54.30	0.18	1.53	1.14	2.68	0.11	17.44	20.15	1.23	0.05	98.81
T708	68	94BCW3192	till	0.5-0.84	green	Cr-Diopside	54.52	0.31	1.46	1.25	2.52	0.09	17.53	20.87	1.20	0.06	99.79
T708	64	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.75	0.11	1.46	1.26	2.56	0.11	17.90	20.87	1.15	0.04	99.22
T708	67	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.95	0.18	1.52	1.27	2.41	0.14	18.09	20.21	1.32	0.04	99.11
T708	80	94BCW3192	till	0.5-0.84	green	Cr-Diopside	54.78	0.24	1.62	1.32	2.61	0.08	17.45	20.24	1.29	0.06	99.69
T708	74	94BCW3192	till	0.5-0.84	green	Cr-Diopside	53.44	0.24	1.70	1.33	2.46	0.10	17.11	20.25	1.39	0.05	98.06
T708	75	94BCW3192	till	0.5-0.84	green	Cr-Diopside	54.60	0.17	1.66	1.40	2.56	0.05	17.38	20.26	1.44	0.04	99.58
T670	19	94BCW3192	till	0.25-0.5	green	Diopside	53.28	0.06	1.08	0.09	5.72	0.32	15.35	23.78	0.48	0.00	100.15
T670	6	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.13	0.20	1.71	1.50	2.48	0.12	17.17	20.91	1.42	0.03	99.66
T670	29	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.47	0.10	1.62	1.56	2.47	0.08	17.72	20.45	1.25	0.06	99.78
T670	31	94BCW3192	till	0.25-0.5	emerald	HiCr-Diopside	54.42	0.19	0.99	1.58	2.01	0.09	17.33	22.04	1.11	0.02	99.77
T670	37	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.46	0.22	1.26	1.59	2.24	0.13	17.28	21.10	1.42	0.02	99.72
T670	50	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.54	0.23	1.28	1.61	2.37	0.10	17.32	21.52	1.32	0.04	100.30
T670	22	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.12	0.27	2.39	1.69	2.72	0.15	16.64	19.21	2.03	0.02	99.24
T670	24	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.82	0.10	0.33	1.76	1.97	0.09	17.57	22.42	1.05	0.02	100.13
T670	47	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	53.83	0.24	1.35	2.14	2.42	0.11	16.87	20.54	1.71	0.00	99.18
T670	44	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	53.83	0.22	1.39	2.25	2.23	0.10	16.65	20.46	1.72	0.03	98.88
T670	25	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.48	0.24	1.41	2.34	2.36	0.16	16.72	20.08	1.82	0.03	99.63
T670	40	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.32	0.08	1.95	2.37	2.40	0.12	16.90	18.89	2.00	0.02	99.03
T670	18	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.14	0.04	2.15	2.68	2.17	0.12	16.44	19.29	2.25	0.02	99.30
T670	46	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.06	0.22	1.29	2.80	2.30	0.09	16.36	20.74	1.66	0.07	99.59
T670	52	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.67	0.06	1.97	2.86	2.22	0.07	16.61	19.09	2.25	0.04	99.85
T670	41	94BCW3192	till	0.25-0.5	green	HiCr-Diopside	54.42	0.11	1.74	2.97	2.33	0.12	16.86	19.14	2.19	0.03	99.91
T708	65	94BCW3192	till	0.5-0.84	green	HiCr-Diopside	53.69	0.29	1.67	1.52	2.58	0.09	17.17	20.23	1.67	0.02	98.91
T708	78	94BCW3192	till	0.5-0.84	green	HiCr-Diopside	54.28	0.11	1.60	1.53	2.54	0.06	17.24	20.29	1.43	0.05	99.11
T708	66	94BCW3192	till	0.5-0.84	green	HiCr-Diopside	53.14	0.16	1.32	2.78	2.44	0.08	16.78	19.48	1.89	0.04	98.10
T708	77	94BCW3192	till	0.5-0.84	green	HiCr-Diopside	54.05	0.12	1.23	2.81	2.20	0.09	16.64	19.24	1.76	0.02	98.14
T709	32	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.82	0.18	1.59	0.69	2.81	0.09	18.32	19.91	1.06	0.05	98.53
T709	19	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.17	0.13	1.41	0.74	2.94	0.09	18.73	19.84	1.01	0.07	99.14
T709	1	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.40	0.19	1.80	0.77	3.08	0.09	17.55	20.20	1.43	0.03	99.54
T709	51	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.68	0.17	1.29	0.84	2.92	0.11	17.52	21.42	1.04	0.04	99.03
T709	17	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.85	0.07	1.16	1.02	2.67	0.06	18.62	20.75	0.93	0.07	100.20
T709	5	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.33	0.31	1.50	1.05	2.84	0.12	17.69	20.56	1.16	0.05	99.60
T709	2	94BCW3193	till	0.5-0.84	green	Cr-Diopside	55.09	0.16	1.36	1.08	2.63	0.11	17.94	20.82	1.07	0.04	100.29
T709	22	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.63	0.11	1.28	1.09	2.76	0.10	18.47	20.21	1.01	0.07	99.71
T709	14	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.83	0.07	1.28	1.10	2.56	0.09	17.98	20.80	1.06	0.06	99.81
T709	34	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.59	0.12	1.40	1.12	2.84	0.13	17.95	19.77	1.14	0.05	98.10

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	28	94BCW3193	till	0.5-0.84	green	Cr-Diopside	52.21	0.04	1.38	1.13	2.82	0.10	17.65	20.38	1.02	0.06	96.78
T709	40	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.28	0.15	1.41	1.17	2.39	0.10	17.38	20.85	1.09	0.06	97.87
T709	55	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.03	0.25	1.28	1.17	2.43	0.10	17.43	21.35	1.04	0.03	99.12
T709	36	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.61	0.15	1.53	1.19	2.65	0.09	17.43	19.95	1.24	0.05	98.88
T709	24	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.48	0.11	1.40	1.24	2.57	0.11	17.79	20.52	1.09	0.06	99.37
T709	6	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.11	0.09	1.36	1.24	2.64	0.09	17.68	20.65	1.07	0.06	98.98
T709	42	94BCW3193	till	0.5-0.84	green	Cr-Diopside	55.11	0.15	0.39	1.25	1.95	0.05	17.55	22.99	0.80	0.02	100.24
T709	54	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.75	0.19	1.60	1.25	2.53	0.13	17.38	20.44	1.31	0.06	98.65
T709	18	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.75	0.15	1.60	1.26	2.59	0.10	17.22	20.15	1.26	0.05	99.11
T709	60	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.65	0.16	1.59	1.29	2.62	0.13	17.15	20.13	1.31	0.05	98.06
T709	37	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.53	0.10	1.52	1.29	2.52	0.11	17.64	20.70	1.18	0.06	98.64
T709	49	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.07	0.06	1.44	1.29	2.51	0.08	17.70	20.43	1.13	0.07	97.76
T709	43	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.77	0.13	1.45	1.30	2.57	0.10	17.71	20.40	1.14	0.06	98.63
T709	26	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.45	0.11	1.43	1.30	2.66	0.09	18.14	20.06	1.20	0.06	99.49
T709	30	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.51	0.18	1.55	1.31	2.60	0.09	17.08	20.65	1.34	0.04	98.36
T709	13	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.35	0.06	1.51	1.32	2.61	0.08	17.67	20.20	1.21	0.06	98.05
T709	20	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.12	0.10	0.38	1.32	1.76	0.07	17.27	22.85	0.72	0.05	97.64
T709	25	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.33	0.22	1.63	1.34	2.58	0.09	17.78	20.17	1.32	0.05	99.49
T709	47	94BCW3193	till	0.5-0.84	green	Cr-Diopside	53.80	0.08	1.28	1.36	2.72	0.10	18.44	20.26	1.10	0.07	99.20
T709	31	94BCW3193	till	0.5-0.84	green	Cr-Diopside	52.65	0.18	1.20	1.37	2.48	0.10	16.90	20.91	1.14	0.05	96.98
T709	56	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.84	0.22	1.36	1.41	2.63	0.10	16.91	20.28	1.45	0.02	99.22
T709	50	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.72	0.16	1.59	1.42	2.62	0.10	17.25	20.33	1.36	0.02	99.57
T709	45	94BCW3193	till	0.5-0.84	green	Cr-Diopside	54.36	0.16	1.61	1.46	2.55	0.04	17.31	20.44	1.40	0.05	99.37
T709	61	94BCW3193	till	0.5-0.84	pl green	Diopside	53.81	0.26	1.79	0.48	2.81	0.11	16.91	20.63	1.36	0.03	98.19
T709	57	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.88	0.17	0.92	1.50	2.44	0.07	17.18	21.39	1.12	0.05	98.71
T709	9	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.23	0.19	1.31	1.57	2.32	0.13	17.13	21.07	1.21	0.04	99.18
T709	11	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.64	0.10	1.45	1.58	2.23	0.09	17.27	20.41	1.28	0.11	98.15
T709	15	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.58	0.19	1.62	1.61	2.60	0.12	17.37	20.14	1.40	0.07	98.69
T709	29	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.02	0.18	1.63	1.69	2.71	0.08	16.93	19.35	1.75	0.03	97.37
T709	7	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.66	0.09	0.38	1.71	1.67	0.05	17.33	22.74	0.96	0.00	99.58
T709	12	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.93	0.24	1.65	1.74	2.82	0.11	16.87	19.50	1.72	0.04	98.61
T709	23	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.02	0.12	1.13	1.74	2.37	0.08	17.60	20.71	1.18	0.04	99.00
T709	27	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.30	0.26	1.21	1.77	2.31	0.08	17.34	20.51	1.44	0.02	99.22
T709	10	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.86	0.23	1.26	1.78	2.29	0.13	16.70	20.11	1.43	0.04	98.84
T709	39	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.58	0.02	1.39	1.84	1.96	0.12	17.35	20.37	1.40	0.02	98.04
T709	33	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.74	0.24	1.35	1.86	2.48	0.14	16.99	20.09	1.57	0.03	98.48
T709	35	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.55	0.26	1.33	1.93	2.51	0.13	16.77	20.04	1.62	0.04	99.18
T709	3	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	55.01	0.17	1.70	2.00	2.35	0.14	17.36	18.94	1.52	0.05	99.22
T709	16	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.65	0.06	2.54	2.01	2.70	0.16	16.06	18.32	2.37	0.01	98.87
T709	53	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.50	0.30	1.87	2.04	2.56	0.12	16.55	19.18	1.87	0.04	99.03

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	8	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.91	0.27	1.64	2.09	2.61	0.04	16.85	19.48	1.83	0.05	99.78
T709	4	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.13	0.17	1.52	2.21	2.36	0.10	16.95	20.02	1.62	0.03	99.10
T709	59	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.21	0.27	1.53	2.26	2.58	0.12	16.80	19.35	1.83	0.03	97.97
T709	38	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.74	0.20	1.27	2.31	2.12	0.13	16.25	20.49	1.61	0.02	99.15
T709	58	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.72	0.26	1.52	2.42	2.50	0.12	16.59	19.06	1.83	0.04	98.06
T709	21	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.39	0.25	1.70	2.44	2.68	0.13	16.99	19.20	1.95	0.02	99.74
T709	48	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	53.51	0.22	1.46	2.45	2.51	0.11	17.25	19.96	1.84	0.09	99.39
T709	46	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	54.12	0.28	1.18	2.73	2.30	0.15	17.25	19.33	1.77	0.08	99.19
T709	44	94BCW3193	till	0.5-0.84	green	HiCr-Diopside	55.42	0.10	1.76	3.60	2.30	0.09	16.38	17.99	2.22	0.10	99.96
T671	78	94BCW3194	till	0.25-0.5	green	Cr-Diopside	54.12	0.27	1.77	0.62	2.64	0.15	17.65	20.99	1.35	0.02	99.58
T671	89	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.32	0.17	0.80	0.75	2.43	0.12	17.51	23.32	0.77	0.01	99.20
T671	109	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.15	0.14	1.24	0.86	2.83	0.07	17.72	21.24	1.00	0.03	98.28
T671	97	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.47	0.10	1.31	1.04	2.64	0.09	18.47	21.03	0.99	0.06	99.20
T671	102	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.80	0.10	1.33	1.06	2.62	0.10	18.31	21.24	1.04	0.05	99.64
T671	103	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.55	0.14	0.80	1.07	2.62	0.05	17.65	22.86	0.93	0.04	99.70
T671	100	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.38	0.08	1.30	1.07	2.66	0.13	18.19	21.08	1.00	0.05	98.93
T671	87	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.64	0.19	1.53	1.08	2.81	0.12	17.99	21.00	1.11	0.05	99.52
T671	91	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.30	0.12	1.32	1.11	2.53	0.09	17.90	21.42	1.01	0.05	98.85
T671	105	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.13	0.13	1.59	1.12	2.55	0.12	17.72	21.41	1.15	0.05	98.95
T671	92	94BCW3194	till	0.25-0.5	green	Cr-Diopside	52.68	0.19	1.45	1.16	2.52	0.09	17.57	21.70	1.14	0.03	98.54
T671	106	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.78	0.13	1.33	1.16	2.64	0.12	18.35	21.11	1.02	0.05	99.69
T671	107	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.36	0.16	1.41	1.17	2.90	0.06	18.21	20.53	1.02	0.06	98.88
T671	99	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.46	0.21	1.68	1.18	2.50	0.07	17.41	20.88	1.36	0.04	98.76
T671	73	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.62	0.11	1.36	1.19	2.42	0.08	17.71	21.50	1.08	0.06	99.13
T671	68	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.78	0.15	1.60	1.20	2.68	0.13	17.85	20.81	1.25	0.04	99.47
T671	93	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.10	0.18	1.64	1.23	2.52	0.12	17.66	20.76	1.29	0.07	98.56
T671	94	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.38	0.20	0.91	1.26	2.38	0.03	17.59	22.26	1.01	0.04	99.06
T671	69	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.23	0.14	1.61	1.29	2.53	0.07	17.72	20.82	1.31	0.05	98.77
T671	70	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.51	0.23	1.67	1.29	2.59	0.11	17.78	20.86	1.33	0.06	99.42
T671	81	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.59	0.19	1.64	1.29	2.56	0.12	17.45	20.85	1.36	0.02	99.07
T671	88	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.50	0.09	0.30	1.31	1.70	0.10	17.61	23.75	0.75	0.02	99.13
T671	74	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.73	0.13	1.40	1.32	2.70	0.09	17.63	21.19	1.11	0.05	99.33
T671	80	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.83	0.16	2.47	1.34	2.47	0.08	17.17	19.36	1.98	0.02	98.88
T671	83	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.59	0.18	1.72	1.35	2.53	0.07	17.62	20.79	1.35	0.07	99.26
T671	104	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.51	0.14	1.59	1.35	2.52	0.10	18.14	20.45	1.34	0.03	99.16
T671	85	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.77	0.22	1.67	1.38	2.59	0.13	17.82	21.01	1.30	0.05	99.94
T671	82	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.70	0.13	1.58	1.39	2.53	0.16	18.29	20.12	1.38	0.05	99.32
T671	75	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.72	0.23	1.18	1.48	2.38	0.07	17.11	21.78	1.32	0.04	99.31
T671	84	94BCW3194	till	0.25-0.5	green	Cr-Diopside	53.36	0.20	1.17	1.48	2.43	0.12	17.22	21.78	1.15	0.02	98.93
T709	113	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.93	0.24	1.30	0.58	2.66	0.08	17.50	21.79	1.09	0.03	99.19

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	121	94BCW3194	till	0.5-0.84	green	Cr-Diopside	52.90	0.22	1.74	0.62	2.99	0.12	17.28	19.84	1.43	0.03	97.17
T709	117	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.39	0.16	1.60	0.71	2.56	0.10	17.42	21.02	1.27	0.03	98.27
T709	119	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.64	0.27	1.58	0.80	3.08	0.09	17.29	20.65	1.15	0.11	98.66
T709	104	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.28	0.32	1.35	0.89	2.80	0.11	17.95	20.55	1.09	0.07	99.40
T709	114	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.96	0.19	1.38	0.96	2.75	0.12	18.28	20.50	1.13	0.05	100.31
T709	107	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.13	0.11	1.32	1.07	2.66	0.07	17.98	20.80	1.02	0.05	99.20
T709	108	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.47	0.08	1.21	1.07	2.71	0.08	18.16	20.29	0.98	0.05	98.11
T709	106	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.12	0.29	1.21	1.08	2.44	0.11	17.60	21.19	1.03	0.05	99.10
T709	110	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.91	0.09	1.35	1.11	2.72	0.10	17.74	20.63	1.06	0.05	98.77
T709	111	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.23	0.08	1.29	1.12	2.74	0.14	18.09	19.95	0.99	0.08	97.72
T709	131	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.85	0.11	1.26	1.19	2.65	0.12	17.58	21.12	1.06	0.07	99.01
T709	131b	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.18	0.16	1.28	1.19	2.54	0.09	17.84	20.95	1.04	0.07	99.33
T709	126	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.51	0.13	0.35	1.21	1.72	0.08	17.43	23.11	0.74	0.02	98.31
T709	103	94BCW3194	till	0.5-0.84	green	Cr-Diopside	52.64	0.20	1.62	1.24	2.69	0.15	17.54	19.73	1.34	0.06	97.22
T709	120	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.97	0.11	1.57	1.26	2.56	0.10	17.69	20.34	1.31	0.05	98.96
T709	97	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.76	0.12	1.63	1.27	2.54	0.15	17.56	20.60	1.34	0.05	100.01
T709	112	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.55	0.17	1.58	1.28	2.64	0.09	18.07	20.32	1.29	0.07	100.05
T709	102	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.48	0.19	1.65	1.29	2.58	0.13	18.25	19.47	1.40	0.06	98.51
T709	96	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.52	0.10	1.63	1.34	2.67	0.09	17.33	20.46	1.41	0.03	98.58
T709	129	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.66	0.14	1.57	1.34	2.75	0.08	17.42	20.10	1.33	0.07	98.46
T709	100	94BCW3194	till	0.5-0.84	green	Cr-Diopside	54.38	0.21	1.58	1.35	2.53	0.07	17.56	20.26	1.36	0.03	99.31
T709	124	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.79	0.08	1.68	1.36	2.59	0.08	17.33	20.68	1.35	0.04	98.98
T709	127	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.97	0.14	1.65	1.38	2.44	0.10	17.11	20.35	1.33	0.04	98.51
T709	123	94BCW3194	till	0.5-0.84	green	Cr-Diopside	53.54	0.20	1.66	1.39	2.36	0.06	16.96	20.94	1.40	0.04	98.55
T709	128	94BCW3194	till	0.5-0.84	green	Cr-Diopside	52.16	0.27	1.56	1.43	2.78	0.13	17.11	19.82	1.77	0.12	97.15
T671	96	94BCW3194	till	0.25-0.5	green	Diopside	51.91	0.02	1.69	0.21	6.50	0.17	16.88	20.96	0.33	0.01	98.67
T671	67	94BCW3194	till	0.25-0.5	green	Diopside	53.68	0.25	2.08	0.24	3.64	0.07	17.20	20.58	1.43	0.02	99.19
T671	77	94BCW3194	till	0.25-0.5	green	Diopside	54.05	0.26	1.88	0.45	2.87	0.09	17.82	20.56	1.42	0.03	99.43
T671	76	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.87	0.23	1.38	1.54	2.43	0.08	17.61	21.18	1.23	0.05	99.60
T671	111	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.63	0.20	1.21	1.63	2.45	0.10	17.42	21.73	1.21	0.04	99.60
T671	72	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.28	0.24	1.24	1.95	2.29	0.13	17.06	21.13	1.51	0.05	98.88
T671	98	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.79	0.25	1.41	2.17	2.36	0.11	16.97	20.44	1.69	0.05	99.24
T671	90	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.19	0.14	0.44	2.23	1.75	0.10	17.04	22.97	1.11	0.03	99.00
T671	95	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.36	0.28	1.82	2.27	2.52	0.09	16.69	19.67	1.98	0.01	98.69
T671	101	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.71	0.09	2.07	2.30	2.33	0.12	17.18	19.25	2.10	0.03	99.19
T671	110	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.19	0.08	0.55	2.30	2.20	0.01	16.89	21.74	1.44	0.02	98.41
T671	86	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.37	0.26	1.52	2.42	2.10	0.10	17.18	20.67	1.61	0.06	99.29
T671	108	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.75	0.28	2.48	2.46	2.58	0.11	16.30	18.42	2.45	0.01	98.84
T671	79	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.48	0.10	1.95	3.06	2.27	0.08	16.79	19.12	2.13	0.04	99.02
T671	71	94BCW3194	till	0.25-0.5	green	HiCr-Diopside	53.29	0.18	1.60	3.15	2.38	0.10	16.31	19.42	2.14	0.03	98.59

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	118	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	53.30	0.31	1.67	1.51	2.82	0.09	17.26	19.90	1.63	0.04	98.53
T709	116	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	54.43	0.22	1.23	1.51	2.47	0.11	17.26	21.11	1.23	0.03	99.61
T709	99	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	54.48	0.30	1.29	1.63	2.44	0.15	16.95	20.95	1.48	0.03	99.69
T709	130	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	53.10	0.11	1.40	1.77	2.47	0.14	18.24	19.39	1.29	0.07	97.96
T709	101	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	54.47	0.28	1.66	2.02	2.79	0.09	16.44	19.46	1.85	0.04	99.10
T709	109	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	54.20	0.00	2.28	2.13	1.77	0.06	16.18	20.15	2.13	0.02	98.91
T709	105	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	52.33	0.13	1.59	2.14	2.40	0.14	16.90	20.00	1.52	0.06	97.21
T709	125	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	53.74	0.15	0.87	2.36	1.94	0.08	16.98	21.04	1.37	0.02	98.55
T709	122	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	53.66	0.15	1.89	2.53	2.55	0.12	16.75	18.46	2.02	0.07	98.19
T709	115	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	53.13	0.09	1.76	2.86	2.20	0.12	17.04	18.61	2.05	0.04	97.91
T709	98	94BCW3194	till	0.5-0.84	green	HiCr-Diopside	52.59	0.19	1.46	3.07	2.25	0.13	16.13	19.64	1.87	0.03	97.36
T693	46	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.25	0.00	1.07	0.65	3.62	0.15	17.11	23.05	0.51	0.00	100.41
T693	30	94BCW3195	till	0.25-0.5	green	Cr-Diopside	55.32	0.14	1.62	0.91	2.67	0.10	18.02	20.53	1.25	0.08	100.63
T693	31	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.34	0.02	1.18	1.07	2.78	0.12	18.25	21.00	1.00	0.07	99.83
T693	36	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.82	0.10	0.42	1.15	1.80	0.08	17.44	23.89	0.81	0.01	100.53
T693	45	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.86	0.13	1.31	1.16	2.61	0.13	17.90	21.19	1.05	0.07	100.40
T693	18	94BCW3195	till	0.25-0.5	green	Cr-Diopside	52.87	0.07	1.21	1.17	2.64	0.12	16.49	21.31	0.97	0.07	96.92
T693	38	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.79	0.13	1.40	1.17	2.73	0.15	17.62	21.66	1.06	0.06	100.76
T693	43	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.59	0.19	1.38	1.18	2.67	0.11	17.65	21.09	1.15	0.06	100.07
T693	35	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.57	0.02	1.32	1.21	2.67	0.16	17.99	21.02	1.15	0.06	100.16
T693	24	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.71	0.30	1.43	1.21	2.57	0.14	17.51	20.97	1.22	0.06	100.11
T693	27	94BCW3195	till	0.25-0.5	green	Cr-Diopside	55.01	0.28	1.58	1.25	2.62	0.06	17.67	20.74	1.33	0.03	100.56
T693	22	94BCW3195	till	0.25-0.5	green	Cr-Diopside	55.38	0.13	0.71	1.27	2.46	0.13	17.46	22.93	0.95	0.02	101.44
T693	32	94BCW3195	till	0.25-0.5	green	Cr-Diopside	55.25	0.17	0.46	1.32	1.79	0.08	17.62	23.52	0.79	0.01	101.00
T693	44	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.97	0.08	1.34	1.32	2.58	0.11	17.73	21.08	1.10	0.05	100.37
T693	28	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.92	0.12	1.43	1.32	2.64	0.08	17.83	20.93	1.17	0.07	100.51
T693	25	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.82	0.17	1.63	1.33	2.57	0.10	17.71	20.67	1.36	0.03	100.38
T693	20	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.56	0.03	1.61	1.37	2.54	0.10	17.49	20.66	1.39	0.05	99.78
T693	34	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.58	0.00	0.37	1.45	1.80	0.06	17.17	23.52	0.95	0.02	99.93
T693	26	94BCW3195	till	0.25-0.5	green	Cr-Diopside	54.50	0.14	1.59	1.49	2.53	0.15	17.33	20.79	1.42	0.04	99.98
T711	29	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.40	0.18	1.29	0.98	2.52	0.11	17.67	21.26	1.20	0.04	99.66
T711	30	94BCW3195	till	0.5-0.84	green	Cr-Diopside	50.77	0.08	1.14	1.04	2.60	0.09	16.05	21.45	0.84	0.06	94.13
T711	35	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.15	0.16	1.39	1.06	2.95	0.13	18.73	19.91	1.14	0.05	99.67
T711	28	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.20	0.18	0.95	1.08	2.62	0.07	17.91	22.45	1.00	0.02	100.47
T711	27	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.36	0.25	1.36	1.17	2.69	0.09	17.67	20.91	1.17	0.05	99.72
T711	31	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.30	0.22	1.50	1.18	3.11	0.12	17.64	21.03	1.25	0.05	100.40
T711	33	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.05	0.20	1.63	1.28	2.71	0.06	17.54	20.63	1.36	0.04	99.51
T711	26	94BCW3195	till	0.5-0.84	green	Cr-Diopside	54.04	0.25	1.62	1.33	2.66	0.11	17.57	20.43	1.37	0.05	99.41
T711	38	94BCW3195	till	0.5-0.84	green	Diopside	54.55	0.35	1.86	0.48	3.04	0.12	17.64	20.71	1.41	0.03	100.18
T693	40	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.98	0.23	1.63	1.59	2.88	0.10	16.80	20.49	1.69	0.04	100.42

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T693	19	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.49	0.30	1.17	1.63	2.37	0.11	17.19	21.54	1.38	0.05	100.22
T693	29	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.56	0.14	1.15	1.64	2.44	0.09	17.23	21.56	1.22	0.05	100.08
T693	33	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.29	0.11	1.74	1.71	2.59	0.13	16.79	20.76	1.55	0.04	99.71
T693	42	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.69	0.11	1.48	1.79	2.47	0.06	16.90	20.33	1.69	0.06	99.58
T693	21	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.71	0.35	1.87	1.80	2.85	0.09	16.93	19.47	1.78	0.02	99.87
T693	23	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.82	0.29	1.59	1.81	2.82	0.10	17.29	19.92	1.63	0.05	100.32
T693	41	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	55.37	0.07	0.91	2.16	1.81	0.10	17.28	21.70	1.27	0.03	100.69
T693	39	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.39	0.22	0.90	2.38	1.91	0.09	17.02	21.82	1.38	0.05	100.14
T693	37	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	55.09	0.24	1.40	2.60	2.36	0.08	16.66	20.46	1.64	0.05	100.59
T693	17	94BCW3195	till	0.25-0.5	green	HiCr-Diopside	54.68	0.12	1.51	4.20	2.24	0.08	16.29	18.15	2.49	0.04	99.78
T711	34	94BCW3195	till	0.5-0.84	green	HiCr-Diopside	54.68	0.11	1.65	1.53	2.62	0.10	17.91	20.36	1.43	0.05	100.43
T711	32	94BCW3195	till	0.5-0.84	green	HiCr-Diopside	54.43	0.27	1.83	1.63	2.52	0.08	17.46	19.25	1.87	0.02	99.37
T711	36	94BCW3195	till	0.5-0.84	green	HiCr-Diopside	53.70	0.21	1.33	2.31	2.44	0.13	16.93	20.38	1.70	0.03	99.15
T671	114	94BCW3196	till	0.25-0.5	green	Cr-Diopside	52.24	0.18	1.31	0.82	3.27	0.09	17.82	22.76	0.34	0.01	98.84
T671	115	94BCW3198	till	0.25-0.5	green	Diopside	52.14	0.06	1.04	0.15	5.14	0.21	16.88	22.75	0.35	0.01	98.72
T671	119	94BCW3199	till	0.25-0.5	green	Cr-Diopside	50.85	0.18	3.57	0.51	4.63	0.12	16.05	22.95	0.38	0.01	99.24
T671	122	94BCW3199	till	0.25-0.5	green	Diopside	52.19	0.00	0.90	0.00	6.17	0.33	16.01	22.92	0.29	0.00	98.82
T671	121	94BCW3199	till	0.25-0.5	green	Diopside	52.67	0.12	1.40	0.08	4.40	0.14	16.87	23.03	0.46	0.01	99.18
T671	118	94BCW3199	till	0.25-0.5	green	Diopside	52.83	0.00	0.49	0.18	5.67	0.24	15.90	23.70	0.37	0.00	99.37
T671	120	94BCW3199	till	0.25-0.5	green	Diopside	51.54	0.03	2.02	0.30	5.29	0.18	16.23	22.48	0.38	0.00	98.45
T671	117	94BCW3199	till	0.25-0.5	green	Diopside	52.53	0.12	0.89	0.48	4.44	0.18	17.07	22.91	0.45	0.01	99.07
T672	42	94BCW3200	till	0.25-0.5	green	Cr-Diopside	54.27	0.23	1.42	0.84	2.57	0.10	17.76	21.56	1.07	0.09	99.90
T672	43	94BCW3200	till	0.25-0.5	green	Cr-Diopside	53.85	0.27	1.63	1.19	2.78	0.14	17.24	20.63	1.33	0.05	99.10
T672	44	94BCW3200	till	0.25-0.5	green	Cr-Diopside	54.17	0.17	1.58	1.27	2.40	0.10	17.86	20.69	1.39	0.02	99.64
T672	45	94BCW3200	till	0.25-0.5	green	Cr-Diopside	54.03	0.17	1.69	1.43	2.47	0.03	17.42	20.66	1.41	0.04	99.34
T711	65	94BCW3200	till	0.5-0.84	green	Cr-Diopside	55.38	0.21	0.82	0.93	2.71	0.07	17.75	22.36	0.92	0.04	101.18
T711	63	94BCW3200	till	0.5-0.84	green	Cr-Diopside	54.18	0.20	1.39	0.93	2.85	0.15	18.08	20.06	1.15	0.05	99.03
T711	62	94BCW3200	till	0.5-0.84	green	Cr-Diopside	54.52	0.17	1.39	1.11	2.53	0.07	18.03	21.06	1.11	0.05	100.05
T711	60	94BCW3200	till	0.5-0.84	green	Cr-Diopside	54.02	0.03	1.32	1.25	2.63	0.10	17.85	21.22	1.12	0.07	99.60
T711	64	94BCW3200	till	0.5-0.84	green	Cr-Diopside	54.83	0.07	1.29	1.27	2.63	0.10	18.35	20.33	1.11	0.05	100.01
T711	57	94BCW3200	till	0.5-0.84	green	Cr-Diopside	53.42	0.15	1.70	1.30	2.62	0.09	17.35	20.40	1.33	0.05	98.40
T711	59	94BCW3200	till	0.5-0.84	green	Cr-Diopside	55.56	0.16	1.62	1.36	2.52	0.07	17.62	20.65	1.36	0.06	100.98
T672	41	94BCW3200	till	0.25-0.5	emerald	HiCr-Diopside	53.85	0.18	1.65	1.71	2.38	0.16	17.07	20.57	1.47	0.05	99.07
T711	58	94BCW3200	till	0.5-0.84	green	HiCr-Diopside	53.93	0.23	0.81	1.50	2.34	0.08	17.12	21.83	1.12	0.05	99.02
T711	61	94BCW3200	till	0.5-0.84	green	HiCr-Diopside	54.97	0.19	0.45	1.70	2.57	0.15	18.08	21.55	0.93	0.02	100.63
T672	72	94BCW3201	till	0.25-0.5	green	Cr-Diopside	52.65	0.09	2.31	1.09	4.70	0.23	15.57	21.94	0.89	0.00	99.45
T672	71	94BCW3201	till	0.25-0.5	green	Cr-Diopside	54.86	0.20	0.94	1.26	2.43	0.07	17.62	22.38	1.06	0.04	100.86
T711	74	94BCW3201	till	0.5-0.84	green	Cr-Diopside	54.13	0.08	1.22	1.05	2.85	0.12	18.17	20.80	1.00	0.05	99.46
T711	73	94BCW3201	till	0.5-0.84	green	Cr-Diopside	54.71	0.00	1.26	1.09	2.70	0.12	18.55	20.65	1.04	0.05	100.15
T711	72	94BCW3201	till	0.5-0.84	green	Cr-Diopside	55.29	0.16	1.40	1.30	2.58	0.08	18.25	20.62	1.24	0.05	100.97

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	73	94BCW3201	till	0.25-0.5	green	Diopside	51.26	0.20	2.73	0.27	5.38	0.17	15.68	20.56	0.66	0.21	97.12
T672	105	94BCW3202	till	0.25-0.5	green	Cr-Diopside	52.88	0.10	1.46	0.60	4.64	0.14	16.79	22.43	0.46	0.00	99.51
T672	117	94BCW3203	till	0.25-0.5	green	Diopside	53.07	0.06	0.71	0.05	4.70	0.14	16.25	24.22	0.30	0.00	99.50
T672	123	94BCW3204	till	0.25-0.5	green	Cr-Diopside	53.04	0.03	1.55	1.00	4.14	0.18	16.91	22.38	0.58	0.00	99.81
T672	125	94BCW3204	till	0.25-0.5	green	Cr-Diopside	51.68	0.29	2.96	1.20	4.15	0.12	18.28	20.76	0.18	0.01	99.64
T672	126	94BCW3204	till	0.25-0.5	green	Diopside	53.12	0.01	1.33	0.00	3.39	0.67	16.48	25.01	0.07	0.01	100.07
T672	124	94BCW3204	till	0.25-0.5	green	Diopside	52.88	0.09	1.56	0.31	5.33	0.14	17.28	21.89	0.36	0.00	99.84
T694	21	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.10	0.09	1.11	0.56	5.31	0.21	16.65	22.50	0.26	0.01	100.80
T694	16	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.57	0.12	0.80	0.95	2.64	0.11	17.21	22.93	0.91	0.02	100.25
T694	23	94BCW3205	till	0.25-0.5	green	Cr-Diopside	55.02	0.26	1.23	1.09	2.55	0.06	17.50	21.89	1.21	0.03	100.83
T694	22	94BCW3205	till	0.25-0.5	green	Cr-Diopside	55.12	0.07	1.59	1.19	2.72	0.13	17.81	20.26	1.30	0.06	100.26
T694	8	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.37	0.22	1.51	1.23	2.69	0.09	17.59	20.85	1.21	0.06	99.80
T694	9	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.71	0.11	1.57	1.24	2.72	0.10	17.82	20.69	1.29	0.03	100.29
T694	17	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.98	0.23	0.86	1.26	2.44	0.08	17.33	22.44	1.05	0.03	100.70
T694	20	94BCW3205	till	0.25-0.5	green	Cr-Diopside	55.04	0.18	0.82	1.28	2.68	0.10	16.97	22.50	0.97	0.03	100.57
T694	12	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.67	0.18	1.63	1.33	2.58	0.11	17.41	20.90	1.40	0.05	100.25
T694	6	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.19	0.17	1.64	1.35	2.50	0.09	17.43	21.10	1.36	0.03	99.84
T694	27	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.88	0.22	1.50	1.39	2.68	0.18	17.42	21.16	1.22	0.06	100.72
T694	30	94BCW3205	till	0.25-0.5	green	Cr-Diopside	55.20	0.04	1.25	1.41	2.60	0.10	17.98	20.74	1.12	0.06	100.50
T694	5	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.87	0.23	1.64	1.42	2.56	0.06	17.20	20.91	1.41	0.04	100.34
T694	2	94BCW3205	till	0.25-0.5	green	Cr-Diopside	54.88	0.20	1.32	1.45	2.38	0.09	17.71	21.70	1.19	0.05	100.96
T710	70	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.94	0.08	1.52	0.60	2.73	0.13	18.16	21.04	1.03	0.05	99.27
T710	108	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.81	0.32	1.81	0.64	3.46	0.11	17.44	20.65	1.41	0.02	99.67
T710	134	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.11	0.22	0.75	0.69	2.64	0.09	17.73	22.95	0.83	0.02	101.01
T710	113	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.75	0.21	1.41	0.88	2.50	0.08	17.69	20.96	1.24	0.04	99.77
T710	124	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.43	0.07	1.32	0.90	2.74	0.09	18.22	20.62	1.04	0.05	99.47
T710	128	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.76	0.32	1.84	0.91	3.10	0.13	17.44	19.71	1.50	0.06	99.76
T710	61	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.12	0.03	1.35	0.93	2.74	0.15	18.77	20.52	1.04	0.06	100.69
T710	98	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.35	0.27	1.67	0.93	2.67	0.09	17.62	20.92	1.24	0.05	100.80
T710	56	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.15	0.04	1.30	0.98	2.46	0.10	17.82	21.70	0.97	0.05	100.57
T710	86	94BCW3205	till	0.5-0.84	green	Cr-Diopside	52.82	0.23	1.17	1.01	2.67	0.09	17.71	21.33	1.14	0.09	98.24
T710	88	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.86	0.05	1.40	1.01	2.82	0.10	18.12	21.04	1.15	0.07	100.61
T710	126	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.93	0.24	1.40	1.04	2.82	0.11	17.65	20.68	1.10	0.06	99.04
T710	83	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.17	0.12	1.49	1.04	2.57	0.11	18.23	20.72	1.19	0.06	99.68
T710	101	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.07	0.25	1.38	1.05	2.84	0.15	17.55	21.15	1.16	0.07	99.66
T710	99	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.16	0.18	1.41	1.12	2.69	0.09	18.08	20.62	1.05	0.04	100.43
T710	64	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.04	0.18	1.35	1.13	2.62	0.08	17.84	21.39	1.10	0.07	99.81
T710	89	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.68	0.11	1.36	1.15	2.65	0.14	18.51	20.44	1.07	0.06	100.16
T710	103	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.01	0.07	1.12	1.16	2.60	0.12	18.21	21.47	0.94	0.05	99.75
T710	82	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.16	0.12	1.37	1.18	2.58	0.05	17.58	20.98	1.11	0.08	99.21

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T710	105	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.48	0.10	1.33	1.18	2.62	0.05	18.05	21.40	1.06	0.05	100.32
T710	58	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.53	0.09	1.37	1.19	2.70	0.06	18.10	20.81	1.08	0.10	100.03
T710	54	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.86	0.05	1.25	1.19	2.67	0.14	18.59	20.40	1.07	0.07	100.26
T710	87	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.68	0.32	1.62	1.19	2.82	0.13	17.49	20.61	1.56	0.04	100.47
T710	125	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.53	0.11	1.59	1.19	3.03	0.13	17.83	19.23	0.93	0.05	97.63
T710	131	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.94	0.23	1.35	1.20	2.64	0.09	18.08	20.69	1.11	0.05	99.36
T710	71	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.98	0.24	1.45	1.20	2.62	0.08	17.23	21.63	1.11	0.07	99.62
T710	78	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.38	0.05	1.31	1.20	2.81	0.06	18.36	20.77	1.02	0.07	100.04
T710	112	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.92	0.25	1.93	1.23	2.81	0.11	17.68	19.56	1.73	0.03	99.25
T710	62	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.75	0.16	1.41	1.23	2.41	0.10	17.76	21.36	1.38	0.02	100.59
T710	97	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.11	0.13	1.39	1.24	2.58	0.11	18.03	20.81	1.08	0.07	100.55
T710	122	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.19	0.15	1.55	1.24	2.66	0.13	17.82	20.24	1.26	0.05	99.29
T710	75	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.78	0.18	1.53	1.24	2.52	0.12	17.77	20.51	1.32	0.07	99.05
T710	110	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.57	0.10	1.35	1.24	2.46	0.11	18.20	21.19	1.05	0.05	99.33
T710	80	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.61	0.14	1.56	1.26	2.71	0.11	17.76	20.38	1.28	0.03	99.83
T710	116	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.63	0.15	1.57	1.26	2.60	0.10	17.97	20.28	1.33	0.05	99.94
T710	53	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.40	0.11	1.44	1.26	2.71	0.11	17.96	20.88	1.14	0.03	99.03
T710	111	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.03	0.14	1.46	1.26	2.67	0.12	17.70	20.86	1.18	0.06	99.48
T710	76	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.62	0.33	1.39	1.26	2.70	0.09	17.86	20.90	1.17	0.05	100.37
T710	104	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.75	0.16	1.57	1.27	2.63	0.07	17.74	20.46	1.29	0.05	98.98
T710	73	94BCW3205	till	0 5-0.84	green	Cr-Diopside	54.45	0.16	1.64	1.28	2.68	0.09	17.67	20.40	1.38	0.02	99.76
T710	102	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.36	0.18	1.53	1.28	2.69	0.12	17.74	20.50	1.27	0.05	99.74
T710	77	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.72	0.16	1.60	1.29	2.70	0.06	17.85	20.63	1.30	0.05	99.36
T710	100	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.44	0.27	1.64	1.29	2.69	0.13	17.86	20.14	1.39	0.05	99.89
T710	65	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.16	0.04	1.30	1.29	3.48	0.17	17.32	20.12	1.31	0.04	100.21
T710	72	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.36	0.08	1.39	1.32	2.64	0.05	17.70	21.05	1.16	0.05	100.79
T710	69	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.74	0.23	1.59	1.33	2.55	0.08	18.12	20.20	1.38	0.05	100.28
T710	132	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.48	0.14	1.77	1.34	2.75	0.06	17.12	19.66	1.31	0.09	97.72
T710	63	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.10	0.17	1.64	1.36	2.54	0.11	17.83	20.52	1.38	0.03	100.68
T710	106	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.42	0.13	1.62	1.38	2.52	0.05	17.31	21.06	1.37	0.06	99.89
T710	109	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.06	0.23	1.01	1.38	2.32	0.13	17.45	21.61	1.18	0.04	99.40
T710	79	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.90	0.08	1.46	1.39	3.12	0.13	17.06	21.29	1.42	0.03	99.87
T710	55	94BCW3205	till	0.5-0.84	green	Cr-Diopside	53.72	0.16	1.68	1.43	2.68	0.13	17.85	20.44	1.45	0.03	99.57
T710	66	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.72	0.20	1.64	1.43	2.50	0.12	17.22	20.43	1.41	0.05	99.71
T710	133	94BCW3205	till	0.5-0.84	green	Cr-Diopside	54.08	0.09	0.94	1.46	2.48	0.08	17.58	21.63	1.09	0.05	99.48
T710	91	94BCW3205	till	0.5-0.84	green	Cr-Diopside	55.93	0.23	1.62	1.48	2.50	0.07	17.88	20.00	1.44	0.07	101.21
T694	29	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	55.13	0.22	1.13	1.64	2.56	0.12	17.08	21.42	1.37	0.03	100.69
T694	1	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	55.40	0.30	1.62	1.95	2.55	0.12	16.78	20.25	1.76	0.03	100.75
T694	15	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.84	0.23	1.34	2.06	2.46	0.14	16.96	20.61	1.59	0.03	100.26
T694	18	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.58	0.29	1.37	2.16	2.46	0.12	16.95	20.61	1.68	0.04	100.23

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	13	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	53.71	0.17	1.64	2.23	2.46	0.12	16.59	19.61	1.90	0.01	98.42
T694	7	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.70	0.24	1.39	2.34	2.40	0.05	16.53	20.67	1.72	0.04	100.07
T694	4	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	55.05	0.27	1.12	2.37	2.37	0.13	16.71	21.48	1.47	0.03	101.00
T694	11	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.80	0.17	1.07	2.50	2.36	0.13	16.53	20.77	1.71	0.03	100.06
T694	24	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	55.02	0.27	1.64	2.77	2.49	0.12	16.60	19.27	2.12	0.05	100.33
T694	25	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	55.07	0.24	1.77	2.91	2.26	0.09	17.00	19.23	2.06	0.05	100.67
T694	14	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.36	0.04	1.22	3.73	2.24	0.11	15.38	20.83	2.23	0.00	100.15
T694	10	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	52.31	0.17	1.85	3.90	2.33	0.11	14.97	18.13	2.29	0.04	96.09
T694	3	94BCW3205	till	0.25-0.5	green	HiCr-Diopside	54.76	0.15	0.73	4.84	1.99	0.14	16.05	18.98	2.40	0.06	100.11
T710	68	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	53.73	0.19	1.63	1.53	2.60	0.06	17.63	20.89	1.43	0.06	99.75
T710	81	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.12	0.23	1.57	1.61	2.66	0.12	17.12	20.36	1.63	0.01	99.45
T710	94	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.80	0.20	1.23	1.67	2.46	0.08	17.32	21.63	1.28	0.05	100.72
T710	118	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	55.00	0.42	1.62	1.75	2.73	0.14	17.00	20.18	1.69	0.05	100.57
T710	123	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.61	0.15	2.37	1.75	2.62	0.11	17.05	19.48	2.07	0.04	100.25
T710	92	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.40	0.25	1.27	1.79	2.42	0.09	17.23	20.68	1.49	0.05	99.65
T710	57	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.36	0.25	0.95	1.89	2.40	0.11	17.10	21.95	1.21	0.07	100.26
T710	67	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	55.23	0.26	1.43	1.91	2.54	0.10	17.15	20.44	1.68	0.03	100.76
T710	95	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.12	0.21	1.21	1.96	2.37	0.09	17.24	20.79	1.54	0.04	99.57
T710	90	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	55.17	0.30	1.74	1.98	2.71	0.13	17.04	19.85	1.89	0.03	100.84
T710	84	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	55.58	0.18	1.81	2.00	2.75	0.07	17.03	19.44	1.93	0.03	100.82
T710	119	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.08	0.14	0.20	2.00	1.88	0.11	17.08	22.29	1.15	0.01	98.93
T710	121	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.39	0.24	1.41	2.01	2.60	0.08	16.59	20.55	1.63	0.05	99.53
T710	74	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.30	0.23	1.39	2.04	2.52	0.10	17.14	20.14	1.70	0.02	99.57
T710	59	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.01	0.22	1.79	2.05	2.93	0.10	16.73	19.27	1.89	0.01	98.99
T710	93	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.58	0.31	1.55	2.35	2.58	0.08	16.82	19.97	1.74	0.05	100.01
T710	96	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.25	0.06	0.43	2.46	2.22	0.09	16.95	21.72	1.43	0.01	99.62
T710	114	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.25	0.27	2.26	2.90	2.73	0.10	16.57	18.48	2.44	0.04	100.02
T710	60	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.49	0.29	1.42	2.98	2.31	0.07	16.90	20.27	1.82	0.07	100.61
T710	115	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.16	0.09	1.40	3.28	2.30	0.14	16.87	19.20	2.12	0.02	99.57
T710	129	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	53.11	0.07	1.90	3.66	2.16	0.12	16.53	18.30	2.45	0.01	98.32
T710	85	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	55.12	0.23	1.34	3.70	2.23	0.08	17.08	18.64	2.21	0.06	100.69
T710	130	94BCW3205	till	0.5-0.84	green	HiCr-Diopside	54.68	0.05	1.35	3.72	2.12	0.08	16.57	18.75	2.24	0.03	99.60
T673	41	94BCW3206	till	0.25-0.5	green	Cr-Diopside	54.07	0.23	1.48	1.01	2.46	0.08	17.64	21.88	1.26	0.04	100.14
T673	43	94BCW3206	till	0.25-0.5	green	Cr-Diopside	54.55	0.23	0.90	1.22	2.37	0.13	17.88	22.74	1.10	0.03	101.14
T673	40	94BCW3206	till	0.25-0.5	green	Cr-Diopside	53.86	0.12	1.61	1.27	2.61	0.09	18.04	20.88	1.43	0.05	99.96
T673	37	94BCW3206	till	0.25-0.5	green	Cr-Diopside	54.27	0.13	1.67	1.32	2.53	0.12	18.00	20.98	1.58	0.23	100.83
T673	36	94BCW3206	till	0.25-0.5	green	Cr-Diopside	54.06	0.18	0.88	1.33	2.21	0.10	17.69	22.77	1.21	0.05	100.46
T712	11	94BCW3206	till	0.5-0.84	green	Cr-Diopside	54.10	0.06	1.26	1.03	2.59	0.11	18.33	20.41	1.00	0.06	98.95
T712	18	94BCW3206	till	0.5-0.84	green	Cr-Diopside	54.46	0.14	1.30	1.03	2.65	0.08	18.09	20.68	0.98	0.08	99.48
T712	20	94BCW3206	till	0.5-0.84	green	Cr-Diopside	54.10	0.25	1.24	1.10	2.45	0.09	17.40	21.39	1.05	0.05	99.11

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T712	19	94BCW3206	till	0.5-0.84	green	Cr-Diopside	53.66	0.16	1.46	1.12	2.60	0.10	17.61	20.60	1.10	0.04	98.43
T712	17	94BCW3206	till	0.5-0.84	green	Cr-Diopside	52.71	0.08	1.33	1.17	2.67	0.10	18.48	19.69	1.12	0.04	97.39
T712	13	94BCW3206	till	0.5-0.84	green	Cr-Diopside	54.54	0.19	0.88	1.28	2.42	0.12	17.16	21.66	1.04	0.03	99.31
T673	42	94BCW3206	till	0.25-0.5	green	HiCr-Diopside	54.67	0.14	0.57	2.25	1.89	0.10	17.03	23.05	1.48	0.03	101.20
T673	38	94BCW3206	till	0.25-0.5	green	HiCr-Diopside	53.97	0.04	1.54	2.34	1.78	0.12	17.19	21.14	1.79	0.00	99.91
T673	39	94BCW3206	till	0.25-0.5	green	HiCr-Diopside	54.25	0.27	1.43	2.41	2.47	0.13	16.70	20.68	1.96	0.04	100.32
T712	15	94BCW3206	till	0.5-0.84	green	HiCr-Diopside	55.85	0.14	0.79	1.52	2.26	0.14	16.79	21.97	1.08	0.04	100.58
T712	14	94BCW3206	till	0.5-0.84	green	HiCr-Diopside	54.40	0.23	1.59	1.62	2.63	0.15	17.86	19.43	1.61	0.03	99.54
T712	16	94BCW3206	till	0.5-0.84	green	HiCr-Diopside	55.07	0.03	2.33	1.99	2.09	0.10	16.11	20.00	2.17	0.01	99.90
T712	12	94BCW3206	till	0.5-0.84	green	HiCr-Diopside	55.17	0.24	2.06	2.11	2.86	0.17	16.28	18.94	2.07	0.02	99.92
T674	16	94BCW3207	till	0.25-0.5	pl green	Cr-Diopside	53.93	0.13	1.81	1.00	4.41	0.22	17.19	22.01	0.72	0.02	101.45
T674	1	94BCW3207	till	0.25-0.5	green	Cr-Diopside	52.42	0.21	1.03	1.08	2.36	0.07	17.12	22.16	1.02	0.17	97.65
T674	7	94BCW3207	till	0.25-0.5	green	Cr-Diopside	53.72	0.22	1.05	1.18	2.31	0.08	17.32	22.58	1.08	0.04	99.59
T674	14	94BCW3207	till	0.25-0.5	pl green	Cr-Diopside	52.67	0.07	3.32	1.26	1.46	0.08	16.50	22.79	1.12	0.00	99.28
T674	2	94BCW3207	till	0.25-0.5	green	Cr-Diopside	53.69	0.20	1.18	1.48	2.58	0.11	17.31	21.75	1.25	0.03	99.58
T712	60	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.83	0.08	1.22	1.02	2.82	0.12	18.12	20.91	0.94	0.06	99.09
T712	54	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.27	0.09	1.23	1.10	2.84	0.12	17.75	20.85	1.00	0.06	99.30
T712	51	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.16	0.20	1.51	1.10	2.73	0.12	17.63	20.42	1.24	0.05	98.16
T712	62	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.69	0.14	1.36	1.12	2.56	0.08	18.01	20.54	1.09	0.07	98.65
T712	61	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.41	0.15	1.43	1.13	2.51	0.10	17.10	21.45	1.18	0.02	98.48
T712	48	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.49	0.03	1.48	1.16	2.63	0.05	17.63	20.59	1.17	0.04	98.27
T712	46	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.19	0.15	1.46	1.20	2.52	0.08	17.49	20.44	1.17	0.08	98.78
T712	63	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.85	0.11	1.41	1.23	2.62	0.10	17.81	20.56	1.17	0.07	98.92
T712	47	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.24	0.21	1.40	1.24	2.56	0.09	17.05	20.96	1.21	0.03	99.00
T712	56	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.54	0.19	1.46	1.29	2.71	0.10	17.44	20.83	1.26	0.06	99.88
T712	57	94BCW3207	till	0.5-0.84	green	Cr-Diopside	53.62	0.14	1.47	1.36	2.69	0.10	17.55	20.37	1.22	0.08	98.61
T712	52	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.34	0.13	1.64	1.37	2.54	0.08	17.34	20.48	1.33	0.04	99.29
T712	53	94BCW3207	till	0.5-0.84	green	Cr-Diopside	54.09	0.16	1.89	1.41	2.67	0.11	16.45	19.28	1.29	0.05	97.39
T674	15	94BCW3207	till	0.25-0.5	pl green	Diopside	53.08	0.05	0.81	0.01	4.57	0.24	16.03	24.97	0.40	0.01	100.16
T674	10	94BCW3207	till	0.25-0.5	green	Diopside	52.57	0.08	1.40	0.02	4.69	0.14	15.61	24.38	0.50	0.00	99.39
T674	17	94BCW3207	till	0.25-0.5	pl green	Diopside	53.22	0.05	1.09	0.07	6.56	0.31	15.00	23.95	0.56	0.01	100.80
T674	8	94BCW3207	till	0.25-0.5	green	Diopside	52.89	0.07	1.03	0.35	4.77	0.22	16.62	23.13	0.42	0.00	99.50
T712	55	94BCW3207	till	0.5-0.84	green	Diopside	54.03	0.06	0.85	0.38	2.27	0.08	18.48	22.48	0.53	0.01	99.17
T674	6	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.11	0.24	1.22	1.52	2.27	0.04	17.08	21.23	1.46	0.02	98.18
T674	9	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	54.01	0.21	1.66	1.56	2.50	0.10	17.38	20.86	1.56	0.06	99.88
T674	13	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.46	0.25	1.55	1.57	2.86	0.11	17.23	20.99	1.54	0.05	99.61
T674	5	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.97	0.24	1.22	1.65	2.30	0.10	17.26	21.47	1.52	0.04	99.78
T674	3	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	54.04	0.25	1.39	1.80	2.44	0.09	17.14	21.09	1.62	0.03	99.89
T674	4	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.72	0.25	1.50	2.75	2.38	0.12	16.81	19.57	2.17	0.04	99.30
T674	12	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.78	0.21	1.48	2.94	2.19	0.11	16.56	20.71	1.82	0.06	99.86

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	11	94BCW3207	till	0.25-0.5	green	HiCr-Diopside	53.77	0.12	0.76	3.07	2.25	0.14	16.53	21.19	1.73	0.04	99.57
T712	45	94BCW3207	till	0.5-0.84	green	HiCr-Diopside	53.70	0.23	1.42	1.53	2.43	0.07	16.11	20.04	1.23	0.06	96.80
T712	50	94BCW3207	till	0.5-0.84	green	HiCr-Diopside	53.64	0.18	1.60	1.56	2.66	0.11	17.77	19.27	1.41	0.05	98.26
T712	59	94BCW3207	till	0.5-0.84	green	HiCr-Diopside	54.84	0.09	1.59	1.61	2.64	0.06	17.22	20.08	1.38	0.04	99.54
T712	49	94BCW3207	till	0.5-0.84	green	HiCr-Diopside	55.11	0.10	0.69	1.95	1.69	0.04	17.53	21.76	1.18	0.03	100.08
T712	58	94BCW3207	till	0.5-0.84	green	HiCr-Diopside	53.71	0.09	2.13	2.31	2.80	0.15	16.56	18.14	2.23	0.03	98.15
T674	122	94BCW3208	till	0.25-0.5	green	Cr-Diopside	51.94	0.12	4.21	0.92	1.65	0.12	16.64	23.69	0.69	0.03	99.99
T674	111	94BCW3208	till	0.25-0.5	green	Cr-Diopside	54.22	0.12	1.39	1.08	2.52	0.09	18.23	21.42	1.15	0.07	100.27
T674	113	94BCW3208	till	0.25-0.5	green	Cr-Diopside	53.85	0.22	1.36	1.09	2.49	0.09	17.72	22.10	1.07	0.07	100.06
T674	115	94BCW3208	till	0.25-0.5	green	Cr-Diopside	53.90	0.08	0.71	1.09	1.67	0.07	17.50	24.04	0.79	0.02	99.86
T674	119	94BCW3208	till	0.25-0.5	green	Cr-Diopside	54.01	0.12	1.32	1.12	2.49	0.11	18.30	21.15	1.17	0.05	99.83
T674	124	94BCW3208	till	0.25-0.5	green	Cr-Diopside	53.61	0.21	1.38	1.17	2.68	0.09	17.27	21.43	1.23	0.05	99.10
T674	116	94BCW3208	till	0.25-0.5	green	Cr-Diopside	53.32	0.22	1.32	1.17	2.57	0.11	17.73	21.86	1.16	0.05	99.50
T674	114	94BCW3208	till	0.25-0.5	green	Cr-Diopside	54.35	0.15	1.61	1.33	2.62	0.11	17.99	20.66	1.38	0.04	100.22
T674	123	94BCW3208	till	0.25-0.5	green	Cr-Diopside	53.39	0.19	1.76	1.35	2.60	0.11	17.66	20.71	1.47	0.05	99.29
T712	92	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.61	0.14	1.41	1.06	2.73	0.12	17.72	20.46	1.11	0.08	99.44
T712	87	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.26	0.02	1.36	1.08	2.59	0.09	18.02	20.77	1.03	0.05	99.26
T712	94	94BCW3208	till	0.5-0.84	green	Cr-Diopside	53.42	0.19	1.57	1.16	2.67	0.13	17.96	20.17	1.23	0.07	98.56
T712	93	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.31	0.11	1.37	1.23	2.66	0.12	17.38	20.78	1.10	0.07	99.12
T712	85	94BCW3208	till	0.5-0.84	green	Cr-Diopside	53.94	0.06	1.50	1.24	2.53	0.10	17.61	20.35	1.18	0.06	98.57
T712	90	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.39	0.26	1.30	1.25	2.45	0.12	17.03	21.22	1.22	0.05	99.29
T712	96	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.13	0.17	1.60	1.27	2.56	0.10	17.39	20.04	1.34	0.05	98.65
T712	89	94BCW3208	till	0.5-0.84	green	Cr-Diopside	54.09	0.23	1.65	1.29	2.56	0.14	17.33	20.14	1.35	0.04	98.83
T712	91	94BCW3208	till	0.5-0.84	green	Cr-Diopside	53.36	0.19	1.42	1.31	2.49	0.08	17.15	20.53	1.19	0.05	97.78
T712	88	94BCW3208	till	0.5-0.84	green	Cr-Diopside	53.27	0.17	0.88	1.43	2.35	0.08	17.40	21.56	1.11	0.05	98.32
T674	127	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.51	0.25	1.54	1.98	2.51	0.10	16.95	20.53	1.70	0.02	99.09
T674	117	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.76	0.25	1.32	2.11	2.46	0.09	16.91	20.81	1.69	0.03	99.43
T674	109	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.50	0.20	1.18	2.25	2.35	0.10	16.84	21.52	1.61	0.04	99.58
T674	121	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.48	0.23	1.56	2.39	3.00	0.14	16.24	20.45	1.88	0.01	99.38
T674	120	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.33	0.22	1.32	2.83	2.17	0.06	16.53	21.32	1.72	0.06	99.55
T674	110	94BCW3208	till	0.25-0.5	green	HiCr-Diopside	53.83	0.05	1.98	2.97	1.85	0.07	16.23	19.88	2.26	0.00	99.14
T712	97	94BCW3208	till	0.5-0.84	green	HiCr-Diopside	54.92	0.26	1.39	1.83	2.58	0.13	16.54	20.36	1.59	0.03	99.62
T712	95	94BCW3208	till	0.5-0.84	green	HiCr-Diopside	53.40	0.18	1.34	2.10	2.42	0.07	16.81	20.11	1.65	0.05	98.13
T712	86	94BCW3208	till	0.5-0.84	green	HiCr-Diopside	53.53	0.22	1.34	2.24	2.55	0.10	16.78	20.06	1.67	0.02	98.51
T675	60	94BCW3209	till	0.25-0.5	green	Cr-Diopside	53.55	0.26	2.01	0.55	3.09	0.09	17.04	21.04	1.42	0.03	99.08
T675	54	94BCW3209	till	0.25-0.5	green	Cr-Diopside	54.21	0.15	1.39	0.93	2.66	0.05	18.12	21.09	1.11	0.09	99.79
T675	57	94BCW3209	till	0.25-0.5	green	Cr-Diopside	53.21	0.11	1.48	1.08	2.56	0.08	17.68	20.90	1.15	0.06	98.31
T675	56	94BCW3209	till	0.25-0.5	green	Cr-Diopside	53.92	0.14	1.30	1.10	2.53	0.11	18.06	21.07	1.07	0.03	99.33
T675	52	94BCW3209	till	0.25-0.5	green	Cr-Diopside	54.23	0.16	1.66	1.18	2.57	0.12	17.64	20.70	1.39	0.05	99.72
T675	53	94BCW3209	till	0.25-0.5	green	Cr-Diopside	53.83	0.12	0.48	1.29	1.62	0.03	17.57	23.54	0.78	0.01	99.27

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T712	108	94BCW3209	till	0.5-0.84	green	Cr-Diopside	52.91	0.33	1.78	0.65	3.04	0.10	17.17	19.68	1.48	0.03	97.15
T712	107	94BCW3209	till	0.5-0.84	green	Cr-Diopside	52.97	0.26	1.74	0.97	3.34	0.14	16.89	19.34	1.58	0.03	97.26
T712	106	94BCW3209	till	0.5-0.84	green	Cr-Diopside	53.32	0.17	1.33	1.03	2.52	0.15	17.39	21.14	1.28	0.01	98.33
T712	104	94BCW3209	till	0.5-0.84	green	Cr-Diopside	53.87	0.00	0.46	1.04	1.86	0.06	17.31	23.50	0.72	0.00	98.81
T712	105	94BCW3209	till	0.5-0.84	green	Cr-Diopside	53.30	0.16	1.56	1.22	2.65	0.09	17.92	20.19	1.28	0.04	98.39
T675	62	94BCW3209	till	0.25-0.5	green	Diopside	52.61	0.06	1.15	0.04	5.74	0.23	15.40	23.77	0.57	0.02	99.58
T675	61	94BCW3209	till	0.25-0.5	green	Diopside	52.80	0.07	0.84	0.07	5.86	0.19	15.06	23.65	0.66	0.02	99.21
T675	58	94BCW3209	till	0.25-0.5	green	HiCr-Diopside	53.54	0.20	1.07	1.79	2.32	0.05	16.89	21.91	1.23	0.03	99.03
T675	55	94BCW3209	till	0.25-0.5	green	HiCr-Diopside	53.51	0.24	1.50	1.99	2.52	0.07	16.92	20.03	1.72	0.03	98.51
T675	51	94BCW3209	till	0.25-0.5	green	HiCr-Diopside	54.23	0.08	2.10	2.27	2.40	0.04	16.95	18.93	2.17	0.02	99.21
T675	59	94BCW3209	till	0.25-0.5	green	HiCr-Diopside	53.40	0.24	1.73	3.09	2.51	0.13	16.34	18.62	2.30	0.03	98.39
T725	3	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.28	0.20	1.70	1.41	2.84	0.10	17.09	20.54	1.64	0.03	99.84
T725	4	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.71	0.11	1.57	1.32	2.62	0.11	17.76	20.91	1.35	0.05	100.53
T725	10	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.94	0.21	1.26	0.68	3.11	0.13	17.93	21.54	1.06	0.06	100.92
T725	22	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	53.74	0.24	1.24	0.84	3.10	0.07	17.64	21.24	1.13	0.06	99.29
T725	25	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.57	0.12	1.35	1.14	2.53	0.09	17.77	21.73	1.11	0.05	100.45
T725	28	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.31	0.17	1.39	1.31	2.60	0.09	18.06	21.05	1.17	0.07	100.22
T725	30	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	54.22	0.12	1.35	1.12	2.70	0.15	18.13	21.25	1.04	0.07	100.13
T725	31	94BCW3215	kimberlite	0.25-0.5	green	Cr-Diopside	53.63	0.12	1.24	1.32	2.68	0.11	17.58	21.82	1.04	0.05	99.58
T726	39	94BCW3215	kimberlite	0.5-0.84	green	Cr-Diopside	53.76	0.09	1.35	1.18	2.64	0.13	18.38	20.94	1.17	0.06	99.69
T726	46	94BCW3215	kimberlite	0.5-0.84	green	Cr-Diopside	54.43	0.20	0.79	1.31	2.43	0.12	17.14	22.95	1.07	0.03	100.46
T726	48	94BCW3215	kimberlite	0.5-0.84	green	Cr-Diopside	54.50	0.10	1.32	1.24	2.64	0.12	18.03	21.02	1.16	0.06	100.18
T726	50	94BCW3215	kimberlite	0.5-0.84	green	Cr-Diopside	54.62	0.25	1.52	0.61	2.56	0.12	17.55	21.51	1.27	0.01	100.03
T727	17	94BCW3215	kimberlite	0.84-2.0	green	Cr-Diopside	54.76	0.10	0.45	1.25	1.73	0.06	17.62	23.92	0.79	0.01	100.67
T727	20	94BCW3215	kimberlite	0.84-2.0	green	Cr-Diopside	54.67	0.09	1.15	1.09	2.79	0.10	18.68	21.14	0.97	0.07	100.74
T725	14	94BCW3215	kimberlite	0.25-0.5	green	Diopside	55.01	0.00	0.42	0.39	3.14	0.11	18.62	23.26	0.26	0.04	101.25
T726	41	94BCW3215	kimberlite	0.5-0.84	green	Diopside	54.53	0.21	1.85	0.33	3.10	0.08	17.41	20.83	1.41	0.01	99.76
T725	1	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.82	0.15	0.77	2.57	1.93	0.14	17.16	21.37	1.52	0.02	100.45
T725	2	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.40	0.13	1.62	2.01	2.70	0.09	17.21	20.02	1.77	0.01	99.97
T725	5	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.09	0.17	0.90	2.45	2.43	0.12	16.82	21.41	1.53	0.05	99.96
T725	6	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.33	0.11	0.78	2.71	2.04	0.12	16.82	21.43	1.49	0.08	99.91
T725	8	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	55.09	0.30	1.30	2.10	2.43	0.08	17.08	21.03	1.63	0.05	101.09
T725	9	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.11	0.09	1.56	2.24	2.35	0.07	17.61	19.81	1.69	0.03	99.57
T725	11	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.27	0.14	1.64	2.59	2.56	0.11	16.80	19.49	2.09	0.04	99.73
T725	12	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.23	0.12	1.60	1.70	2.57	0.11	17.51	20.50	1.45	0.04	99.83
T725	13	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.39	0.07	0.86	3.08	1.95	0.06	16.71	21.37	1.64	0.01	100.14
T725	15	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	53.94	0.21	1.61	3.72	2.26	0.07	16.43	18.60	2.30	0.04	99.18
T725	16	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.49	0.29	1.60	2.10	2.68	0.10	17.35	20.03	1.75	0.05	100.45
T725	17	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	55.18	0.05	1.59	2.42	2.34	0.12	17.70	19.51	1.75	0.04	100.70
T725	18	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	53.93	0.16	1.73	2.43	2.74	0.10	16.87	19.58	2.05	0.06	99.64

Appendix C.3 Probe data for diopsides from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T725	19	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.96	0.23	1.28	1.87	2.48	0.11	17.13	20.90	1.62	0.02	100.60
T725	20	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.81	0.07	0.87	3.02	2.00	0.11	16.94	21.10	1.61	0.03	100.55
T725	21	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.91	0.10	0.80	3.07	1.97	0.11	16.86	21.08	1.59	0.04	100.52
T725	24	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	53.94	0.13	0.38	2.10	2.07	0.09	16.99	22.84	1.20	0.03	99.77
T725	26	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.32	0.06	0.81	2.88	2.06	0.15	16.91	21.35	1.64	0.02	100.18
T725	27	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	53.90	0.15	0.83	2.94	1.91	0.08	16.80	21.15	1.60	0.07	99.42
T725	29	94BCW3215	kimberlite	0.25-0.5	green	HiCr-Diopside	54.04	0.07	0.78	2.95	2.10	0.12	16.95	21.24	1.63	0.04	99.91
T726	35	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.15	0.09	0.87	2.97	2.00	0.15	16.88	21.20	1.65	0.03	99.98
T726	36	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	53.69	0.20	0.80	2.92	1.97	0.14	16.87	21.24	1.62	0.03	99.47
T726	37	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.32	0.10	0.83	3.01	2.05	0.09	16.85	21.09	1.67	0.02	100.03
T726	38	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	53.55	0.10	0.88	3.10	2.10	0.12	17.11	21.21	1.67	0.05	99.88
T726	40	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.31	0.27	1.63	2.09	2.66	0.13	17.17	20.12	1.80	0.04	100.23
T726	42	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	53.94	0.03	1.88	2.77	2.31	0.12	16.34	19.16	2.25	0.04	98.84
T726	43	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.59	0.08	0.83	3.09	2.01	0.11	16.97	21.17	1.64	0.01	100.49
T726	44	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.58	0.31	1.34	2.06	2.47	0.10	17.14	20.84	1.71	0.06	100.61
T726	45	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	54.14	0.32	1.64	1.60	2.85	0.12	17.43	20.35	1.74	0.02	100.22
T726	47	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	53.59	0.31	1.61	2.08	2.56	0.07	16.96	20.02	1.75	0.04	98.98
T726	49	94BCW3215	kimberlite	0.5-0.84	green	HiCr-Diopside	53.98	0.38	1.62	1.78	2.57	0.10	17.08	20.33	1.83	0.02	99.69
T727	18	94BCW3215	kimberlite	0.84-2.0	green	HiCr-Diopside	53.90	0.10	1.59	1.68	2.59	0.12	17.67	20.52	1.46	0.05	99.68
T727	19	94BCW3215	kimberlite	0.84-2.0	green	HiCr-Diopside	54.49	0.22	1.23	1.81	2.43	0.07	17.31	21.07	1.57	0.03	100.23
T727	16	94BCW3215	kimberlite	0.84-2.0	green	HiCr-Diopside	54.43	0.10	1.17	3.16	2.02	0.13	16.92	20.94	1.77	0.07	100.70

Appendix C.4 Probe data for chromites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	8	94BCW3102	till	0.25-0.5	black	Chromite	0.09	1.69	5.10	52.94	30.76	0.31	8.42	0.00	0.00	0.00	99.31
T664	4	94BCW3102	till	0.25-0.5	black	Chromite	0.03	2.44	1.59	57.84	28.90	0.47	8.75	0.01	0.01	0.00	100.02
T705	103	94BCW3120	till	0.5-0.84	black	Ti-Chromite	0.14	4.55	4.30	51.60	30.18	0.37	9.38	0.00	0.02	0.00	100.53
T686	90	94BCW3129	till	0.25-0.5	black	Chromite	0.13	3.09	1.80	55.66	28.90	0.46	9.06	0.02	0.00	0.01	99.11
T686	89	94BCW3129	till	0.25-0.5	black	Chromite	0.14	0.61	2.79	61.24	24.25	0.37	8.90	0.02	0.01	0.02	98.33
T686	91	94BCW3129	till	0.25-0.5	black	Chromite	0.12	0.53	1.74	64.68	21.62	0.41	9.44	0.01	0.00	0.00	98.56
T688	113	94BCW3138	till	0.25-0.5	black	Chromite*	0.14	0.05	3.98	62.14	22.25	0.37	10.19	0.03	0.00	0.00	99.14
T666	98	94BCW3147	till	0.25-0.5	black	Chromite	0.76	0.58	1.68	66.28	18.60	0.39	11.81	0.03	0.04	0.02	100.19
T668	4	94BCW3166	till	0.25-0.5	black	Chromite	0.15	3.78	2.19	52.52	30.62	0.39	8.69	0.00	0.01	0.00	98.36
T668	40	94BCW3166	till	0.25-0.5	black	Chromite	0.18	0.43	6.76	58.65	23.56	0.34	8.69	0.03	0.00	0.00	98.66
T668	18	94BCW3166	till	0.25-0.5	black	Chromite	0.22	1.80	1.54	58.94	27.54	0.45	8.68	0.02	0.01	0.01	99.21
T668	19	94BCW3166	till	0.25-0.5	black	Chromite	0.16	0.22	7.65	59.47	23.48	0.38	8.44	0.02	0.00	0.03	99.84
T668	38	94BCW3166	till	0.25-0.5	black	Chromite	0.21	1.39	1.58	62.38	22.99	0.40	9.82	0.04	0.03	0.03	98.84
T668	49	94BCW3172	till	0.25-0.5	black	Chromite	0.16	2.22	3.49	55.18	28.70	0.41	9.43	0.01	0.00	0.00	99.59
T669	18	94BCW3178	till	0.25-0.5	black	Chromite	0.39	1.85	16.99	42.28	22.17	0.20	13.80	0.04	0.00	0.00	97.73
T669	17	94BCW3178	till	0.25-0.5	black	Chromite	0.25	4.00	4.44	50.66	27.75	0.42	9.79	0.02	0.01	0.01	97.33
T669	16	94BCW3178	till	0.25-0.5	black	Chromite	0.23	2.96	1.93	53.87	29.21	0.45	8.56	0.00	0.00	0.01	97.22
T669	20	94BCW3178	till	0.25-0.5	black	Chromite	0.22	2.77	1.88	55.35	26.89	0.47	9.12	0.01	0.02	0.03	96.75
T669	11	94BCW3178	till	0.25-0.5	black	Chromite	0.10	2.24	2.11	56.56	26.20	0.45	9.34	0.02	0.00	0.00	97.02
T669	55	94BCW3178	till	0.25-0.5	black	Chromite	0.35	2.27	3.20	57.00	25.05	0.46	9.68	0.02	0.00	0.01	98.03
T669	10	94BCW3178	till	0.25-0.5	black	Chromite*	0.20	0.80	3.21	61.61	21.24	0.36	11.12	0.02	0.02	0.00	98.56
T692	63	94BCW3187	till	0.25-0.5	black	Chromite	0.11	3.61	5.21	52.45	28.03	0.43	10.03	0.01	0.01	0.01	99.90
T692	68	94BCW3187	till	0.25-0.5	black	Chromite	0.08	4.31	3.43	52.58	30.79	0.31	9.28	0.04	0.00	0.00	100.81
T692	74	94BCW3187	till	0.25-0.5	black	Chromite	0.10	4.35	4.11	53.33	28.18	0.35	9.81	0.02	0.00	0.00	100.26
T692	71	94BCW3187	till	0.25-0.5	black	Chromite	0.13	4.10	5.37	53.95	25.31	0.36	10.98	0.03	0.01	0.02	100.25
T692	84	94BCW3187	till	0.25-0.5	black	Chromite	0.08	3.81	2.37	54.45	30.04	0.44	9.29	0.01	0.02	0.00	100.51
T692	87	94BCW3187	till	0.25-0.5	black	Chromite	0.12	3.58	6.62	55.12	23.67	0.35	11.24	0.03	0.00	0.01	100.74
T692	64	94BCW3187	till	0.25-0.5	black	Chromite	0.06	2.67	2.93	56.14	28.87	0.44	8.95	0.01	0.00	0.02	100.09
T692	62	94BCW3187	till	0.25-0.5	black	Chromite	0.06	2.10	0.85	61.22	27.76	0.48	8.54	0.00	0.00	0.00	101.00
T692	73	94BCW3187	till	0.25-0.5	black	Chromite*	0.08	0.14	8.35	63.68	17.76	0.34	11.16	0.03	0.09	0.02	101.65
T692	89	94BCW3187	till	0.25-0.5	black	Chromite*	0.10	0.09	6.06	63.82	19.04	0.31	11.55	0.00	0.00	0.01	100.99
T692	78	94BCW3187	till	0.25-0.5	black	Chromite*	0.12	0.00	8.06	64.04	16.96	0.35	11.75	0.04	0.01	0.01	101.34
T692	70	94BCW3187	till	0.25-0.5	black	Chromite*	0.07	0.12	7.37	64.21	18.11	0.30	10.80	0.01	0.00	0.01	100.99
T692	82	94BCW3187	till	0.25-0.5	black	Chromite*	0.08	0.00	7.70	64.33	17.17	0.26	11.57	0.02	0.00	0.00	101.12
T692	61	94BCW3187	till	0.25-0.5	black	Chromite*	0.13	0.82	1.54	68.30	19.79	0.33	10.58	0.00	0.00	0.01	101.51
T708	21	94BCW3187	till	0.5-0.84	black	Ti-Chromite	0.24	4.32	3.44	51.04	29.61	0.41	9.37	0.00	0.00	0.00	98.42
T670	62	94BCW3192	till	0.25-0.5	black	Chromite	0.18	2.27	1.22	52.74	32.61	0.50	7.35	0.01	0.00	0.00	96.88
T670	66	94BCW3192	till	0.25-0.5	black	Chromite	0.15	3.46	1.93	53.45	29.08	0.47	9.00	0.03	0.00	0.00	97.57
T670	78	94BCW3192	till	0.25-0.5	black	Chromite	0.26	3.42	1.97	53.93	28.34	0.43	9.41	0.03	0.00	0.00	97.79
T670	77	94BCW3192	till	0.25-0.5	black	Chromite	0.06	3.12	1.88	54.57	28.76	0.43	9.16	0.00	0.01	0.00	97.98

Appendix C.4 Probe data for chromites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	57	94BCW3192	till	0.25-0.5	black	Chromite	0.23	3.34	3.98	55.77	23.97	0.39	10.98	0.06	0.00	0.01	98.71
T670	76	94BCW3192	till	0.25-0.5	black	Chromite	0.63	2.46	1.69	58.31	25.21	0.47	9.69	0.02	0.00	0.00	98.47
T709	69	94BCW3193	till	0.5-0.84	black	Ti-Chromite	0.19	4.32	3.50	51.29	29.21	0.37	9.39	0.00	0.01	0.00	98.28
T709	68	94BCW3193	till	0.5-0.84	black	Ti-Chromite	0.21	4.21	4.03	51.51	27.88	0.44	9.60	0.01	0.00	0.00	97.89
T709	67	94BCW3193	till	0.5-0.84	black	Ti-Chromite	0.23	3.96	3.77	53.74	25.77	0.36	10.18	0.00	0.00	0.00	98.01
T671	39	94BCW3194	till	0.25-0.5	black	Chromite	0.18	3.41	1.84	54.75	27.56	0.46	8.80	0.03	0.15	0.03	97.19
T671	37	94BCW3194	till	0.25-0.5	black	Chromite	0.06	0.00	15.85	55.35	15.40	0.25	12.72	0.03	0.02	0.00	99.69
T671	50	94BCW3194	till	0.25-0.5	black	Chromite	0.07	3.00	2.10	55.40	28.33	0.52	9.32	0.02	0.00	0.00	98.76
T671	48	94BCW3194	till	0.25-0.5	black	Chromite	0.14	1.45	1.33	62.22	23.98	0.48	9.61	0.00	0.02	0.03	99.26
T671	51	94BCW3194	till	0.25-0.5	black	Chromite*	0.12	0.03	8.33	62.05	17.06	0.27	12.12	0.01	0.00	0.00	100.00
T671	65	94BCW3194	till	0.25-0.5	black	Cr-spinel	0.15	0.06	53.61	12.35	12.10	0.11	18.67	0.02	0.01	0.00	97.07
T693	6	94BCW3195	till	0.25-0.5	black	Chromite	0.10	3.49	1.88	55.54	29.70	0.47	8.96	0.00	0.00	0.01	100.16
T693	3	94BCW3195	till	0.25-0.5	black	Chromite*	0.11	0.09	7.65	63.54	18.28	0.31	10.69	0.00	0.03	0.01	100.71
T693	1	94BCW3195	till	0.25-0.5	black	Chromite*	0.12	0.06	8.60	64.30	15.12	0.37	12.04	0.02	0.01	0.01	100.65
T693	11	94BCW3195	till	0.25-0.5	black	Chromite*	0.13	0.55	2.71	67.03	19.47	0.32	10.97	0.03	0.01	0.00	101.21
T672	50	94BCW3200	till	0.25-0.5	black	Chromite	0.13	3.53	3.97	55.00	25.21	0.42	10.49	0.00	0.00	0.02	98.75
T672	56	94BCW3200	till	0.25-0.5	black	Chromite	0.33	2.78	2.31	55.62	26.83	0.46	9.20	0.01	0.00	0.00	97.53
T672	58	94BCW3200	till	0.25-0.5	black	Cr-spinel	1.85	0.02	50.95	12.74	11.48	0.09	18.03	0.03	0.00	0.02	95.21
T672	83	94BCW3201	till	0.25-0.5	black	Chromite	0.14	1.09	24.18	40.67	20.29	0.40	11.63	0.03	0.02	0.01	98.46
T672	76	94BCW3201	till	0.25-0.5	black	Chromite	0.14	4.10	4.10	51.38	27.90	0.35	9.82	0.04	0.00	0.00	97.81
T672	82	94BCW3201	till	0.25-0.5	black	Chromite*	0.71	0.54	1.65	64.12	19.85	0.39	11.62	0.03	0.10	0.01	99.03
T672	111	94BCW3203	till	0.25-0.5	black	Chromite	0.20	0.16	11.08	46.17	33.42	0.46	6.85	0.01	0.06	0.03	98.42
T693	97	94BCW3205	till	0.25-0.5	black	Chromite	0.08	0.02	25.70	42.54	16.64	0.26	14.38	0.00	0.00	0.00	99.63
T693	83	94BCW3205	till	0.25-0.5	black	Chromite	0.17	4.19	3.37	51.87	30.46	0.36	9.23	0.00	0.00	0.00	99.64
T693	61	94BCW3205	till	0.25-0.5	black	Chromite	0.15	4.23	3.86	52.09	29.54	0.41	9.60	0.03	0.01	0.02	99.93
T693	94	94BCW3205	till	0.25-0.5	black	Chromite	0.14	4.44	3.40	52.21	30.29	0.40	9.06	0.01	0.00	0.00	99.95
T693	67	94BCW3205	till	0.25-0.5	black	Chromite	0.21	4.10	3.44	52.42	30.45	0.42	9.27	0.02	0.01	0.00	100.35
T693	58	94BCW3205	till	0.25-0.5	black	Chromite	0.12	1.99	2.56	53.43	33.29	0.45	7.85	0.00	0.00	0.01	99.72
T693	47	94BCW3205	till	0.25-0.5	black	Chromite	0.11	3.39	1.96	56.21	28.58	0.46	9.21	0.01	0.00	0.00	99.93
T693	62	94BCW3205	till	0.25-0.5	black	Chromite	0.14	3.52	2.39	56.27	28.53	0.46	9.26	0.00	0.00	0.01	100.57
T693	102	94BCW3205	till	0.25-0.5	black	Chromite	0.11	3.21	1.61	56.33	29.59	0.46	8.85	0.03	0.00	0.00	100.19
T693	53	94BCW3205	till	0.25-0.5	black	Chromite	0.12	3.20	3.20	57.70	25.66	0.40	10.12	0.04	0.00	0.00	100.44
T693	91	94BCW3205	till	0.25-0.5	black	Chromite	0.13	1.97	2.70	58.92	27.31	0.46	8.89	0.01	0.02	0.01	100.42
T693	87	94BCW3205	till	0.25-0.5	black	Chromite	0.13	0.06	12.10	59.17	16.50	0.26	12.26	0.02	0.00	0.01	100.50
T693	51	94BCW3205	till	0.25-0.5	black	Chromite	0.14	3.03	1.81	59.18	27.83	0.46	9.42	0.03	0.00	0.01	101.92
T693	54	94BCW3205	till	0.25-0.5	black	Chromite*	0.21	0.09	6.44	62.69	19.65	0.35	11.31	0.01	0.00	0.00	100.74
T693	55	94BCW3205	till	0.25-0.5	black	Chromite*	0.15	0.01	4.77	64.09	21.09	0.34	10.16	0.00	0.06	0.03	100.70
T693	66	94BCW3205	till	0.25-0.5	black	Chromite*	0.12	1.26	2.47	64.34	22.24	0.41	9.86	0.01	0.00	0.01	100.72
T693	96	94BCW3205	till	0.25-0.5	black	Chromite*	0.14	0.20	5.77	64.63	17.77	0.30	11.99	0.00	0.00	0.00	100.80
T693	57	94BCW3205	till	0.25-0.5	black	Chromite*	0.13	0.92	2.65	66.47	19.66	0.34	10.85	0.04	0.00	0.00	101.06

Appendix C.4 Probe data for chromites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T693	72	94BCW3205	till	0.25-0.5	black	Cr-Spinel	0.09	0.11	32.76	35.65	13.04	0.20	16.36	0.03	0.01	0.01	98.28
T710	34	94BCW3205	till	0.5-0.84	black	Chromite	0.10	0.03	18.14	53.11	14.96	0.30	12.93	0.02	0.02	0.01	99.62
T710	33	94BCW3205	till	0.5-0.84	black	Chromite	0.14	0.01	16.62	53.90	17.64	0.32	11.56	0.04	0.03	0.00	100.27
T710	35	94BCW3205	till	0.5-0.84	black	Chromite*	0.14	2.88	2.79	61.26	21.84	0.48	11.19	0.01	0.02	0.00	100.61
T710	32	94BCW3205	till	0.5-0.84	black	Chromite*	0.12	0.26	7.59	63.80	17.44	0.37	11.73	0.01	0.00	0.00	101.31
T673	21	94BCW3206	till	0.25-0.5	black	Chromite	0.24	2.37	4.07	58.97	23.07	0.42	10.95	0.03	0.04	0.02	100.18
T673	57	94BCW3207	till	0.25-0.5	black	Chromite	0.15	4.47	5.57	44.34	34.39	0.42	9.56	0.00	0.00	0.00	98.89
T673	59	94BCW3207	till	0.25-0.5	black	Chromite	0.14	4.23	3.69	50.79	30.19	0.37	9.57	0.01	0.02	0.02	99.03
T673	72	94BCW3207	till	0.25-0.5	black	Chromite	0.17	4.11	4.29	51.42	28.98	0.40	10.21	0.00	0.00	0.00	99.58
T673	64	94BCW3207	till	0.25-0.5	black	Chromite	0.19	2.58	1.94	55.37	29.74	0.45	8.60	0.01	0.02	0.02	98.92
T673	45	94BCW3207	till	0.25-0.5	black	Chromite	0.16	2.94	2.14	57.14	25.37	0.44	9.47	0.03	0.09	0.01	97.78
T673	86	94BCW3207	till	0.25-0.5	black	Chromite	0.09	2.14	3.15	58.96	24.45	0.37	10.00	0.01	0.00	0.00	99.17
T673	84	94BCW3207	till	0.25-0.5	black	Cr-spinel	0.13	0.04	54.73	12.20	12.02	0.11	19.20	0.02	0.00	0.02	98.46
T674	158	94BCW3208	till	0.25-0.5	black	Chromite	0.14	1.14	1.03	62.64	24.64	0.41	9.54	0.03	0.08	0.00	99.64
T674	141	94BCW3208	till	0.25-0.5	black	Chromite	0.14	1.70	1.83	64.74	19.98	0.36	11.26	0.00	0.02	0.01	100.05
T674	144	94BCW3208	till	0.25-0.5	black	Chromite	0.17	0.85	2.12	66.30	18.88	0.27	11.10	0.02	0.00	0.00	99.71
T675	70	94BCW3209	till	0.25-0.5	black	Chromite	0.21	0.05	21.03	48.69	14.33	0.25	13.69	0.02	0.02	0.00	98.29
T675	69	94BCW3209	till	0.25-0.5	black	Chromite	0.22	3.67	5.25	52.59	25.01	0.39	10.86	0.02	0.00	0.00	98.00
T675	66	94BCW3209	till	0.25-0.5	black	Chromite	0.10	0.60	5.20	62.09	19.37	0.32	10.87	0.00	0.00	0.00	98.56
T725	44	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.15	4.42	4.42	51.42	29.97	0.45	9.52	0.04	0.00	0.00	100.38
T725	55	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.17	4.43	4.32	51.68	30.27	0.38	9.48	0.01	0.01	0.01	100.74
T725	46	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.14	4.46	3.38	52.19	30.25	0.42	9.40	0.00	0.02	0.00	100.27
T725	50	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.13	0.09	14.41	57.00	17.27	0.34	10.78	0.01	0.01	0.01	100.05
T725	56	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.18	3.78	3.66	57.10	25.60	0.45	10.45	0.03	0.00	0.00	101.25
T725	47	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.13	2.72	1.74	59.24	27.60	0.40	9.23	0.00	0.00	0.01	101.07
T725	48	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.14	0.15	6.78	60.70	22.46	0.37	9.59	0.03	0.00	0.01	100.21
T725	57	94BCW3215	kimberlite	0.25-0.5	black	Chromite	0.17	0.17	6.71	60.70	22.57	0.36	9.83	0.01	0.00	0.02	100.54
T725	49	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.10	0.06	8.87	62.14	18.85	0.39	10.55	0.02	0.03	0.02	101.02
T725	45	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.19	0.30	4.65	62.16	24.09	0.43	9.18	0.00	0.00	0.01	101.00
T725	53	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.14	0.64	5.82	62.77	20.27	0.31	11.16	0.01	0.00	0.01	101.14
T725	62	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.27	1.72	4.02	62.82	20.56	0.35	11.37	0.02	0.00	0.00	101.13
T725	52	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.12	0.21	6.17	65.66	17.11	0.33	11.66	0.00	0.00	0.01	101.27
T725	61	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.15	0.12	5.35	65.74	18.34	0.34	11.08	0.00	0.00	0.02	101.13
T725	58	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.16	1.06	2.14	66.33	21.43	0.40	9.96	0.03	0.00	0.00	101.52
T725	59	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.17	1.67	1.77	66.39	20.31	0.41	10.88	0.02	0.00	0.01	101.64
T725	51	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.14	0.93	1.88	67.94	19.23	0.35	10.93	0.02	0.00	0.00	101.42
T725	54	94BCW3215	kimberlite	0.25-0.5	black	Chromite*	0.17	1.13	1.59	68.08	19.17	0.37	10.93	0.03	0.00	0.00	101.47
T726	52	94BCW3215	kimberlite	0.5-0.84	black	Chromite	0.15	3.81	2.47	55.30	28.52	0.39	9.36	0.01	0.00	0.00	100.00
T726	63	94BCW3215	kimberlite	0.5-0.84	black	Chromite	0.16	3.54	3.78	56.06	25.59	0.34	10.44	0.06	0.00	0.02	99.98
T726	61	94BCW3215	kimberlite	0.5-0.84	black	Chromite	0.14	3.34	3.07	57.59	25.22	0.41	10.13	0.00	0.00	0.01	99.92

Appendix C.4 Probe data for chromites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T726	51	94BCW3215	kimberlite	0.5-0.84	black	Chromite	0.14	3.33	3.11	58.18	25.41	0.37	10.24	0.00	0.00	0.00	100.78
T726	60	94BCW3215	kimberlite	0.5-0.84	black	Chromite*	0.09	0.16	6.79	62.10	20.39	0.38	10.91	0.04	0.00	0.00	100.86
T726	65	94BCW3215	kimberlite	0.5-0.84	black	Chromite*	0.11	0.56	5.76	63.91	22.15	0.43	8.90	0.01	0.00	0.01	101.82
T726	59	94BCW3215	kimberlite	0.5-0.84	black	Chromite*	0.12	0.14	5.45	63.96	19.50	0.33	11.33	0.01	0.00	0.01	100.85
T727	26	94BCW3215	kimberlite	0.84-2.0	black	Chromite*	0.15	0.10	6.24	65.03	19.17	0.39	10.77	0.00	0.03	0.01	101.89
T727	23	94BCW3215	kimberlite	0.84-2.0	black	Chromite*	0.11	0.03	6.45	65.07	17.04	0.35	11.42	0.02	0.00	0.03	100.50

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	15	94BCW3100	till	0.25-0.5	black	Ilmenite	0.00	52.00	0.04	0.00	46.76	0.43	0.52	0.04	0.00	0.00	99.80
T663	16	94BCW3100	till	0.25-0.5	black	Ilmenite	0.00	48.93	0.07	0.07	48.75	0.38	0.59	0.02	0.01	0.00	98.82
T664	3	94BCW3102	till	0.25-0.5	black	ilmenite	0.00	52.58	0.05	0.00	47.26	0.42	0.18	0.02	0.00	0.01	100.52
T664	5	94BCW3102	till	0.25-0.5	black	ilmenite	0.00	51.68	0.01	0.00	46.91	0.90	0.26	0.02	0.00	0.00	99.78
T664	6	94BCW3102	till	0.25-0.5	black	ilmenite	0.00	52.33	0.07	0.02	46.99	1.25	0.12	0.02	0.00	0.00	100.80
T664	1	94BCW3102	till	0.25-0.5	black	ilmenite	0.00	52.35	0.05	0.03	47.70	0.37	0.26	0.02	0.01	0.02	100.80
T664	2	94BCW3102	till	0.25-0.5	black	ilmenite	0.00	50.08	0.03	0.05	48.99	0.64	0.43	0.01	0.00	0.00	100.23
T664	22	94BCW3103	till	0.25-0.5	black	ilmenite	0.00	47.29	0.05	0.01	50.34	1.45	0.19	0.01	0.02	0.01	99.34
T664	60	94BCW3104	till	0.25-0.5	black	ilmenite	0.00	51.11	0.08	0.02	47.77	0.51	0.68	0.01	0.00	0.00	100.18
T665	10	94BCW3109	till	0.25-0.5	black	Ilmenite	0.00	46.20	0.06	0.00	50.00	1.30	0.83	0.04	0.00	0.00	98.44
T665	8	94BCW3109	till	0.25-0.5	black	Ilmenite	0.00	51.92	0.06	0.01	47.14	0.64	0.21	0.01	0.00	0.00	100.00
T665	9	94BCW3109	till	0.25-0.5	black	Ilmenite	0.02	49.95	0.08	0.02	48.48	0.86	0.38	0.02	0.01	0.01	99.81
T665	13	94BCW3112	till	0.25-0.5	black	Ilmenite	0.00	52.27	0.06	0.00	46.94	0.35	0.13	0.05	0.00	0.02	99.82
T665	12	94BCW3112	till	0.25-0.5	black	Ilmenite	0.07	52.92	0.05	0.03	45.35	1.59	0.28	0.00	0.00	0.00	100.29
T665	14	94BCW3112	till	0.25-0.5	black	Ilmenite	0.00	52.40	0.02	0.04	46.38	0.18	0.63	0.04	0.00	0.00	99.68
T665	16	94BCW3114	till	0.25-0.5	black	Ilmenite	0.00	52.43	0.03	0.00	46.55	0.30	0.54	0.00	0.00	0.00	99.86
T665	20	94BCW3114	till	0.25-0.5	black	Ilmenite	0.00	47.03	0.04	0.01	50.31	0.55	1.04	0.00	0.00	0.00	98.98
T665	18	94BCW3114	till	0.25-0.5	black	Ilmenite	0.00	47.95	0.03	0.02	48.90	2.20	0.43	0.03	0.00	0.00	99.56
T665	17	94BCW3114	till	0.25-0.5	black	Ilmenite	0.00	43.65	0.16	0.02	50.99	1.47	0.79	0.04	0.00	0.00	97.11
T665	19	94BCW3114	till	0.25-0.5	black	Ilmenite	0.00	46.34	0.03	0.03	49.53	1.43	0.49	0.00	0.01	0.00	97.85
T705	104	94BCW3120	till	0.5-0.84	black	Mg-ilmenite	0.00	53.32	0.34	6.67	26.38	0.32	13.51	0.04	0.02	0.00	100.61
T686	88	94BCW3129	till	0.25-0.5	black	ilmenite	0.05	53.59	0.06	0.03	46.42	1.10	0.16	0.01	0.00	0.00	101.42
T688	112	94BCW3138	till	0.25-0.5	black	ilmenite	0.01	49.81	0.04	0.03	47.42	2.68	0.07	0.01	0.00	0.00	100.06
T707	42	94BCW3147	till	0.5-0.84	black	Mg-ilmenite	0.00	52.32	0.39	5.56	29.58	0.35	12.55	0.02	0.00	0.00	100.77
T690	125	94BCW3156	till	0.25-0.5	black	ilmenite	0.02	50.01	0.04	0.04	45.47	3.29	0.29	0.03	0.00	0.00	99.20
T707	67	94BCW3156	till	0.5-0.84	black	Mg-ilmenite	0.00	52.41	0.43	6.31	26.53	0.40	13.76	0.04	0.00	0.00	99.88
T667	23	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.58	0.03	0.00	49.65	1.18	0.04	0.02	0.04	0.00	99.54
T667	24	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	52.61	0.06	0.00	47.31	0.43	0.38	0.02	0.02	0.00	100.81
T667	27	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.74	0.03	0.00	45.50	3.58	0.07	0.00	0.00	0.02	99.94
T667	32	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	49.31	0.05	0.00	46.65	3.49	0.39	0.03	0.01	0.00	99.93
T667	33	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	51.76	0.03	0.00	46.39	1.31	0.28	0.00	0.00	0.00	99.77
T667	35	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.25	0.09	0.00	48.75	1.56	0.80	0.02	0.00	0.00	99.47
T667	40	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.31	0.02	0.00	47.80	2.78	0.69	0.02	0.00	0.00	99.62
T667	50	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.72	0.06	0.00	48.57	0.59	0.24	0.02	0.00	0.01	100.22
T667	41	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.65	0.05	0.01	48.31	0.44	0.34	0.04	0.03	0.00	99.86
T667	13	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	47.92	0.04	0.01	49.16	1.51	0.68	0.05	0.00	0.02	99.38
T667	48	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	51.49	0.03	0.01	45.79	1.17	0.07	0.02	0.00	0.00	98.57
T667	16	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	52.03	0.03	0.01	45.69	2.29	0.20	0.00	0.00	0.01	100.26
T667	36	94BCW3161	till	0.25-0.5	black	Ilmenite	0.02	49.71	0.05	0.01	48.08	0.51	0.45	0.01	0.20	0.04	99.07
T667	37	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	52.02	0.03	0.02	46.19	1.99	0.09	0.00	0.00	0.02	100.35
T667	19	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	51.57	0.03	0.02	47.09	0.68	0.27	0.01	0.02	0.00	99.67
T667	43	94BCW3161	till	0.25-0.5	black	Ilmenite	0.03	52.60	0.03	0.02	46.92	0.39	0.44	0.03	0.00	0.00	100.45
T667	44	94BCW3161	till	0.25-0.5	black	Ilmenite	0.01	52.03	0.03	0.02	47.14	0.19	0.36	0.03	0.00	0.00	99.80

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T667	18	94BCW3161	till	0.25-0.5	black	Ilmenite	0.03	50.98	0.07	0.02	48.09	0.57	0.35	0.02	0.00	0.00	100.13
T667	34	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.96	0.09	0.02	48.03	0.55	0.52	0.02	0.03	0.01	100.23
T667	15	94BCW3161	till	0.25-0.5	black	Ilmenite	0.03	47.04	0.03	0.02	50.63	0.71	0.90	0.00	0.00	0.03	99.38
T667	28	94BCW3161	till	0.25-0.5	black	Ilmenite	0.05	50.86	0.11	0.02	47.51	0.59	0.63	0.00	0.00	0.00	99.76
T667	31	94BCW3161	till	0.25-0.5	black	Ilmenite	0.02	48.43	0.04	0.02	46.11	4.81	0.07	0.01	0.00	0.02	99.53
T667	38	94BCW3161	till	0.25-0.5	black	Ilmenite	0.01	48.94	0.08	0.03	48.68	1.41	0.52	0.01	0.00	0.01	99.68
T667	29	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	52.13	0.06	0.03	46.75	0.75	0.27	0.01	0.01	0.00	100.02
T667	42	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.95	0.03	0.03	47.18	2.81	0.27	0.00	0.00	0.01	99.28
T667	47	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.19	0.06	0.03	48.80	0.70	0.28	0.00	0.01	0.00	100.07
T667	14	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.62	0.03	0.03	49.07	1.21	1.29	0.00	0.00	0.00	100.25
T667	20	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	48.23	0.06	0.03	49.47	0.89	1.01	0.01	0.00	0.02	99.71
T667	26	94BCW3161	till	0.25-0.5	black	Ilmenite	0.02	51.72	0.02	0.03	47.75	0.15	0.13	0.01	0.01	0.00	99.83
T667	22	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.63	0.04	0.04	48.29	0.68	0.07	0.00	0.00	0.01	99.77
T667	30	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	49.81	0.11	0.04	48.11	0.52	0.51	0.00	0.00	0.00	99.10
T667	45	94BCW3161	till	0.25-0.5	black	Ilmenite	0.01	49.37	0.02	0.04	49.50	0.90	0.03	0.03	0.00	0.00	99.90
T667	46	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	51.03	0.04	0.04	47.49	1.89	0.02	0.01	0.00	0.00	100.53
T667	39	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	50.71	0.05	0.05	48.20	0.35	0.34	0.00	0.00	0.01	99.70
T667	49	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	52.58	0.02	0.10	46.79	0.21	0.93	0.02	0.00	0.00	100.66
T667	51	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	46.66	0.38	0.11	51.03	0.47	0.39	0.01	0.02	0.02	99.08
T667	21	94BCW3161	till	0.25-0.5	black	Ilmenite	0.00	47.97	0.03	0.15	50.17	0.57	0.72	0.01	0.00	0.01	99.61
T668	17	94BCW3166	till	0.25-0.5	black	ilmenite	0.11	49.90	0.04	0.00	47.54	1.46	0.05	0.00	0.00	0.01	99.12
T668	21	94BCW3166	till	0.25-0.5	black	ilmenite	0.05	48.20	0.08	0.00	49.78	0.69	0.32	0.00	0.00	0.01	99.14
T668	26	94BCW3166	till	0.25-0.5	black	ilmenite	0.06	50.95	0.04	0.00	45.24	2.93	0.00	0.00	0.00	0.02	99.23
T668	28	94BCW3166	till	0.25-0.5	black	ilmenite	0.07	49.87	0.04	0.00	44.46	4.58	0.06	0.01	0.00	0.00	99.07
T668	29	94BCW3166	till	0.25-0.5	black	ilmenite	0.02	49.01	0.04	0.00	48.72	1.10	0.17	0.01	0.00	0.00	99.08
T668	37	94BCW3166	till	0.25-0.5	black	ilmenite	0.07	50.98	0.03	0.00	47.32	1.49	0.31	0.03	0.02	0.00	100.26
T668	30	94BCW3166	till	0.25-0.5	black	ilmenite	0.05	51.81	0.04	0.01	46.88	0.64	0.47	0.04	0.00	0.01	99.94
T668	6	94BCW3166	till	0.25-0.5	black	ilmenite	0.07	46.19	0.01	0.02	49.49	2.61	0.50	0.00	0.02	0.00	98.91
T668	8	94BCW3166	till	0.25-0.5	black	ilmenite	0.12	46.36	0.04	0.02	50.65	1.82	0.04	0.01	0.02	0.00	99.08
T668	23	94BCW3166	till	0.25-0.5	black	ilmenite	0.05	49.92	0.07	0.02	48.33	0.59	0.48	0.03	0.00	0.00	99.48
T668	10	94BCW3166	till	0.25-0.5	black	ilmenite	0.04	47.50	0.06	0.02	49.10	1.20	1.15	0.02	0.01	0.00	99.10
T668	14	94BCW3166	till	0.25-0.5	black	ilmenite	0.00	50.12	0.04	0.02	48.64	0.69	0.08	0.03	0.00	0.00	99.62
T668	22	94BCW3166	till	0.25-0.5	black	ilmenite	0.00	48.89	0.04	0.02	46.50	2.31	1.05	0.03	0.00	0.01	98.84
T668	9	94BCW3166	till	0.25-0.5	black	ilmenite	0.02	50.39	0.06	0.03	48.48	0.67	0.09	0.02	0.00	0.02	99.78
T668	2	94BCW3166	till	0.25-0.5	black	ilmenite	0.03	50.03	0.03	0.03	47.96	0.71	0.35	0.00	0.01	0.02	99.17
T668	7	94BCW3166	till	0.25-0.5	black	ilmenite	0.01	50.50	0.04	0.03	48.07	0.47	0.28	0.05	0.01	0.00	99.46
T668	16	94BCW3166	till	0.25-0.5	black	ilmenite	0.09	50.64	0.05	0.03	47.70	0.53	0.39	0.03	0.00	0.03	99.49
T668	42	94BCW3166	till	0.25-0.5	black	ilmenite	0.08	41.54	0.04	0.04	54.05	1.69	0.06	0.03	0.00	0.02	97.55
T668	1	94BCW3166	till	0.25-0.5	black	ilmenite	0.00	52.20	0.03	0.04	47.71	0.33	0.22	0.03	0.00	0.00	100.56
T668	12	94BCW3166	till	0.25-0.5	black	ilmenite	0.04	51.10	0.04	0.04	48.43	0.29	0.10	0.00	0.04	0.00	100.07
T668	5	94BCW3166	till	0.25-0.5	black	ilmenite	0.04	48.58	0.04	0.04	49.58	0.82	0.11	0.02	0.00	0.01	99.24
T668	3	94BCW3166	till	0.25-0.5	black	ilmenite	0.12	48.28	0.04	0.07	50.14	0.22	0.19	0.01	0.00	0.00	99.06
T691	11	94BCW3171	till	0.25-0.5	black	Ilmenite	0.07	50.69	0.07	0.02	48.82	0.49	0.31	0.01	0.00	0.00	100.48

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	7	94BCW3171	till	0.25-0.5	black	Ilmenite	0.08	53.07	0.05	0.05	46.37	1.21	0.13	0.01	0.00	0.02	100.97
T691	10	94BCW3171	till	0.25-0.5	black	Ilmenite	0.14	50.03	0.10	0.05	48.39	0.65	0.26	0.00	0.01	0.00	99.63
T691	9	94BCW3171	till	0.25-0.5	black	Ilmenite	0.08	50.65	0.09	0.06	47.88	0.55	0.74	0.04	0.00	0.01	100.08
T691	12	94BCW3171	till	0.25-0.5	black	Ilmenite	0.11	50.02	0.05	0.06	48.17	0.62	0.33	0.00	0.00	0.00	99.35
T691	8	94BCW3171	till	0.25-0.5	black	Ilmenite	0.10	48.33	0.07	0.07	49.13	1.37	1.16	0.00	0.00	0.01	100.23
T668	50	94BCW3172	till	0.25-0.5	black	ilmenite	0.05	47.79	0.07	0.00	47.24	3.44	0.66	0.05	0.02	0.01	99.32
T668	54	94BCW3172	till	0.25-0.5	black	ilmenite	0.02	47.92	0.02	0.00	49.44	2.43	0.14	0.02	0.00	0.00	99.99
T668	52	94BCW3172	till	0.25-0.5	black	ilmenite	0.00	50.97	0.03	0.01	47.24	0.43	0.44	0.02	0.00	0.01	99.16
T668	48	94BCW3172	till	0.25-0.5	black	ilmenite	0.00	50.65	0.02	0.02	47.71	0.95	0.28	0.00	0.00	0.00	99.64
T668	53	94BCW3172	till	0.25-0.5	black	ilmenite	0.04	52.11	0.00	0.05	46.06	0.40	0.50	0.00	0.00	0.01	99.18
T668	51	94BCW3172	till	0.25-0.5	black	ilmenite	0.04	49.14	0.03	0.06	48.47	1.71	0.08	0.00	0.00	0.03	99.56
T669	2	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	49.64	0.09	0.00	47.28	0.40	0.39	0.01	0.01	0.01	97.82
T669	4	94BCW3178	till	0.25-0.5	black	ilmenite	0.03	48.13	0.01	0.00	47.47	2.08	0.04	0.05	0.00	0.00	97.82
T669	8	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	50.02	0.08	0.00	47.01	0.56	0.32	0.02	0.00	0.00	98.08
T669	9	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	49.46	0.02	0.00	47.66	0.26	0.09	0.01	0.00	0.03	97.55
T669	19	94BCW3178	till	0.25-0.5	black	ilmenite	0.08	51.59	0.03	0.00	45.83	0.31	0.26	0.01	0.02	0.02	98.15
T669	27	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	49.38	0.05	0.00	46.59	0.55	0.20	0.01	0.00	0.01	96.81
T669	29	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	51.62	0.02	0.00	45.15	0.21	0.59	0.00	0.00	0.00	97.61
T669	33	94BCW3178	till	0.25-0.5	black	ilmenite	0.09	49.04	0.06	0.00	47.51	0.61	0.16	0.02	0.07	0.00	97.55
T669	35	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	49.34	0.07	0.00	46.95	0.45	0.35	0.02	0.00	0.00	97.23
T669	37	94BCW3178	till	0.25-0.5	black	ilmenite	0.03	49.83	0.09	0.00	46.62	0.35	0.69	0.02	0.00	0.02	97.66
T669	38	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	51.46	0.02	0.00	44.63	1.11	0.30	0.01	0.00	0.03	97.61
T669	43	94BCW3178	till	0.25-0.5	black	ilmenite	0.05	51.62	0.02	0.00	45.69	0.92	0.19	0.01	0.00	0.02	98.52
T669	51	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	48.12	0.05	0.00	46.19	3.41	0.10	0.02	0.00	0.01	97.92
T669	32	94BCW3178	till	0.25-0.5	black	ilmenite	0.04	50.33	0.03	0.00	46.84	0.75	0.16	0.02	0.00	0.00	98.18
T669	47	94BCW3178	till	0.25-0.5	black	ilmenite	0.12	48.86	0.08	0.00	47.16	0.60	0.33	0.02	0.04	0.00	97.20
T669	26	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	48.61	0.09	0.01	47.54	0.74	0.06	0.02	0.01	0.00	97.07
T669	6	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	49.55	0.05	0.01	47.08	0.45	0.62	0.02	0.00	0.03	97.84
T669	1	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	48.91	0.10	0.01	46.56	0.44	0.64	0.03	0.00	0.00	96.69
T669	28	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	50.86	0.07	0.01	45.82	0.76	0.14	0.00	0.00	0.00	97.67
T669	49	94BCW3178	till	0.25-0.5	black	ilmenite	0.05	50.68	0.04	0.01	45.71	0.86	0.49	0.01	0.04	0.01	97.90
T669	53	94BCW3178	till	0.25-0.5	black	ilmenite	0.09	41.18	0.07	0.01	52.64	1.85	0.04	0.01	0.00	0.01	95.91
T669	56	94BCW3178	till	0.25-0.5	black	ilmenite	0.10	39.69	0.04	0.01	52.94	0.87	0.43	0.00	0.00	0.02	94.10
T669	30	94BCW3178	till	0.25-0.5	black	ilmenite	0.11	48.70	0.06	0.02	47.02	0.53	0.66	0.00	0.00	0.00	97.09
T669	48	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	47.60	0.05	0.02	47.92	1.44	0.22	0.00	0.00	0.00	97.24
T669	15	94BCW3178	till	0.25-0.5	black	ilmenite	0.05	43.21	0.10	0.02	50.72	0.72	0.33	0.00	0.01	0.03	95.20
T669	40	94BCW3178	till	0.25-0.5	black	ilmenite	0.37	48.25	0.04	0.02	47.25	0.49	0.50	0.01	0.00	0.00	96.94
T669	14	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	50.96	0.04	0.02	45.51	0.91	0.22	0.01	0.00	0.00	97.66
T669	23	94BCW3178	till	0.25-0.5	black	ilmenite	0.12	44.72	0.04	0.03	49.54	0.76	1.07	0.03	0.00	0.01	96.32
T669	59	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	47.04	0.07	0.03	46.78	1.97	1.06	0.02	0.01	0.02	97.05
T669	41	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	49.16	0.07	0.03	47.09	0.56	0.45	0.00	0.00	0.00	97.38
T669	24	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	49.31	0.05	0.03	46.80	0.40	0.69	0.01	0.01	0.00	97.36
T669	44	94BCW3178	till	0.25-0.5	black	ilmenite	0.13	48.55	0.06	0.03	45.77	0.35	0.46	0.03	0.00	0.00	95.38

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T669	54	94BCW3178	till	0.25-0.5	black	ilmenite	0.04	49.43	0.05	0.03	47.93	0.48	0.12	0.00	0.01	0.00	98.08
T669	13	94BCW3178	till	0.25-0.5	black	ilmenite	0.02	47.40	0.03	0.04	47.96	1.04	0.10	0.02	0.00	0.00	96.61
T669	39	94BCW3178	till	0.25-0.5	black	ilmenite	0.16	47.21	0.04	0.04	44.77	4.36	0.72	0.01	0.00	0.01	97.32
T669	58	94BCW3178	till	0.25-0.5	black	ilmenite	0.03	48.74	0.09	0.05	47.68	0.38	0.43	0.02	0.00	0.00	97.41
T669	36	94BCW3178	till	0.25-0.5	black	ilmenite	0.06	50.76	0.04	0.05	43.87	2.86	0.12	0.00	0.01	0.01	97.78
T669	3	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	36.09	0.06	0.06	55.54	0.57	0.89	0.02	0.00	0.02	93.25
T669	12	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	49.95	0.07	0.06	46.17	0.72	0.29	0.00	0.00	0.01	97.28
T669	7	94BCW3178	till	0.25-0.5	black	ilmenite	0.28	50.71	0.18	0.08	42.81	0.78	0.09	0.01	0.00	0.00	94.94
T669	50	94BCW3178	till	0.25-0.5	black	ilmenite	0.08	48.81	0.05	0.09	48.28	0.27	0.61	0.00	0.00	0.00	98.19
T669	5	94BCW3178	till	0.25-0.5	black	ilmenite	0.00	49.51	0.00	0.10	45.84	1.50	0.07	0.02	0.00	0.00	97.05
T669	34	94BCW3178	till	0.25-0.5	black	ilmenite	0.04	51.19	0.03	0.16	45.06	0.57	0.76	0.03	0.02	0.01	97.86
T692	75	94BCW3187	till	0.25-0.5	black	Ilmenite	0.07	51.64	0.07	0.00	49.33	0.60	0.15	0.00	0.01	0.00	101.87
T692	72	94BCW3187	till	0.25-0.5	black	Ilmenite	0.06	48.61	0.03	0.02	50.67	2.07	0.06	0.02	0.01	0.00	101.54
T692	88	94BCW3187	till	0.25-0.5	black	Ilmenite	0.09	50.12	0.04	0.02	48.60	1.52	0.07	0.30	0.00	0.00	100.76
T692	81	94BCW3187	till	0.25-0.5	black	Ilmenite	0.19	53.01	0.05	0.03	47.08	0.53	0.30	0.07	0.00	0.02	101.27
T692	83	94BCW3187	till	0.25-0.5	black	Ilmenite	0.09	44.07	0.04	0.03	53.32	3.03	0.06	0.02	0.00	0.02	100.68
T692	86	94BCW3187	till	0.25-0.5	black	Ilmenite	0.06	49.94	0.05	0.04	49.45	1.25	0.12	0.02	0.04	0.00	100.97
T692	66	94BCW3187	till	0.25-0.5	black	Ilmenite	0.05	52.40	0.03	0.04	47.28	2.02	0.06	0.02	0.00	0.02	101.91
T692	67	94BCW3187	till	0.25-0.5	black	Ilmenite	0.04	53.44	0.05	0.05	47.12	0.22	0.49	0.00	0.00	0.00	101.42
T692	79	94BCW3187	till	0.25-0.5	black	Ilmenite	0.09	51.86	0.04	0.05	47.67	0.52	0.53	0.03	0.04	0.02	100.85
T692	76	94BCW3187	till	0.25-0.5	black	Ilmenite	0.06	52.42	0.08	0.06	48.02	0.44	0.32	0.02	0.00	0.01	101.42
T692	77	94BCW3187	till	0.25-0.5	black	Ilmenite	0.05	48.38	0.04	0.07	49.39	2.36	0.07	0.02	0.00	0.00	100.37
T692	85	94BCW3187	till	0.25-0.5	black	Ilmenite	0.08	45.53	0.08	0.21	53.24	0.72	0.40	0.01	0.00	0.00	100.28
T692	80	94BCW3187	till	0.25-0.5	black	Mg-Ilmenite	0.06	51.57	0.39	5.80	29.25	0.32	12.52	0.04	0.00	0.01	99.96
T692	69	94BCW3187	till	0.25-0.5	black	Mg-Ilmenite	0.07	53.39	0.41	5.84	26.42	0.33	13.73	0.01	0.04	0.00	100.25
T670	64	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	51.33	0.02	0.00	45.30	1.44	0.19	0.00	0.00	0.01	98.28
T670	69	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	47.81	0.03	0.00	48.81	1.54	0.05	0.01	0.00	0.00	98.24
T670	74	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	49.87	0.06	0.00	46.86	0.73	0.46	0.01	0.00	0.02	98.00
T670	80	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	50.58	0.07	0.00	46.71	0.55	0.41	0.01	0.00	0.00	98.32
T670	81	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	51.14	0.08	0.00	45.23	2.00	0.09	0.02	0.00	0.01	98.57
T670	83	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	41.35	0.02	0.00	54.17	1.61	0.12	0.00	0.00	0.01	97.27
T670	65	94BCW3192	till	0.25-0.5	black	ilmenite	0.01	51.66	0.02	0.00	44.93	0.97	0.46	0.00	0.02	0.01	98.09
T670	60	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	52.53	0.04	0.01	45.13	1.00	0.34	0.03	0.00	0.00	99.08
T670	79	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	49.82	0.07	0.01	46.88	0.65	0.13	0.01	0.00	0.02	97.60
T670	68	94BCW3192	till	0.25-0.5	black	ilmenite	0.08	50.10	0.08	0.02	46.28	0.41	0.67	0.01	0.00	0.00	97.64
T670	84	94BCW3192	till	0.25-0.5	black	ilmenite	0.03	46.51	0.05	0.02	48.80	0.83	1.06	0.02	0.00	0.00	97.31
T670	58	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	50.10	0.07	0.02	47.23	0.40	0.44	0.01	0.00	0.01	98.27
T670	59	94BCW3192	till	0.25-0.5	black	ilmenite	0.06	45.43	0.04	0.02	48.92	0.95	0.56	0.03	0.00	0.01	96.01
T670	71	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	51.55	0.04	0.02	46.03	0.37	0.26	0.00	0.02	0.00	98.29
T670	73	94BCW3192	till	0.25-0.5	black	ilmenite	0.05	50.58	0.04	0.02	46.54	0.53	0.37	0.03	0.00	0.01	98.17
T670	61	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	51.73	0.04	0.03	44.40	1.95	0.14	0.00	0.05	0.01	98.32
T670	70	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	50.27	0.09	0.03	47.23	0.47	0.41	0.02	0.00	0.03	98.53
T670	72	94BCW3192	till	0.25-0.5	black	ilmenite	0.48	51.67	0.02	0.04	43.54	2.06	0.14	0.04	0.00	0.00	97.98

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	67	94BCW3192	till	0.25-0.5	black	ilmenite	0.00	49.94	0.08	0.04	47.24	0.51	0.20	0.01	0.00	0.01	98.03
T670	82	94BCW3192	till	0.25-0.5	black	Mg-ilmenite	0.00	50.98	0.57	5.34	26.81	0.29	13.34	0.02	0.00	0.00	97.34
T671	36	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	50.18	0.08	0.00	47.79	0.55	0.23	0.00	0.00	0.01	98.84
T671	38	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	51.98	0.00	0.00	43.78	3.43	0.03	0.04	0.00	0.00	99.26
T671	40	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	47.75	0.07	0.00	48.01	2.46	0.16	0.01	0.00	0.00	98.46
T671	43	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	50.30	0.06	0.00	47.46	0.92	0.42	0.00	0.00	0.00	99.15
T671	57	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	50.88	0.01	0.00	46.63	1.48	0.13	0.03	0.00	0.00	99.16
T671	60	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	46.48	0.02	0.00	49.65	1.55	0.74	0.00	0.00	0.01	98.45
T671	54	94BCW3194	till	0.25-0.5	black	ilmenite	0.09	47.86	0.10	0.00	49.80	0.59	0.75	0.02	0.00	0.00	99.20
T671	55	94BCW3194	till	0.25-0.5	black	ilmenite	0.01	43.45	0.10	0.00	52.61	0.76	0.74	0.00	0.01	0.01	97.70
T671	34	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	47.26	0.04	0.01	47.57	3.81	0.08	0.01	0.05	0.01	98.83
T671	47	94BCW3194	till	0.25-0.5	black	ilmenite	0.07	48.90	0.05	0.01	47.75	2.10	0.49	0.01	0.01	0.01	99.39
T671	64	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	40.94	0.06	0.01	55.54	1.85	0.05	0.02	0.03	0.00	98.49
T671	41	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	48.93	0.09	0.02	48.97	1.26	0.08	0.01	0.00	0.00	99.35
T671	46	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	48.63	0.03	0.02	48.87	1.29	0.07	0.03	0.00	0.00	98.94
T671	61	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	50.34	0.04	0.02	47.98	1.01	0.06	0.00	0.00	0.03	99.47
T671	63	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	52.45	0.04	0.02	47.11	0.32	0.57	0.02	0.01	0.02	100.54
T671	35	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	46.48	0.05	0.03	49.21	1.27	1.03	0.01	0.00	0.02	98.09
T671	44	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	50.53	0.08	0.03	48.16	0.53	0.34	0.02	0.00	0.00	99.69
T671	59	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	47.11	0.07	0.04	50.00	0.68	1.03	0.01	0.02	0.02	98.98
T671	66	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	47.15	0.05	0.04	49.79	0.46	1.00	0.02	0.00	0.00	98.51
T671	62	94BCW3194	till	0.25-0.5	black	ilmenite	0.00	52.88	0.06	0.05	40.42	0.22	0.02	0.08	0.00	0.02	93.73
T671	58	94BCW3194	till	0.25-0.5	black	ilmenite	0.02	48.78	0.04	0.16	49.42	0.68	0.38	0.01	0.00	0.01	99.48
T671	53	94BCW3194	till	0.25-0.5	black	ilmenite	0.14	50.41	0.02	0.17	47.72	1.05	0.20	0.02	0.01	0.01	99.74
T671	49	94BCW3194	till	0.25-0.5	black	Mg-ilmenite	0.00	54.76	0.33	1.62	28.03	0.29	14.22	0.05	0.00	0.01	99.31
T693	14	94BCW3195	till	0.25-0.5	black	Ilmenite	0.09	52.28	0.04	0.04	46.26	2.13	0.05	0.00	0.01	0.00	100.91
T693	10	94BCW3195	till	0.25-0.5	black	Ilmenite	0.12	51.95	0.09	0.04	48.12	0.51	0.30	0.02	0.01	0.01	101.17
T693	13	94BCW3195	till	0.25-0.5	black	Ilmenite	0.06	51.06	0.09	0.06	48.33	0.70	0.28	0.00	0.00	0.00	100.58
T693	8	94BCW3195	till	0.25-0.5	black	Ilmenite	0.08	52.17	0.11	0.06	48.34	0.47	0.42	0.01	0.01	0.01	101.69
T693	15	94BCW3195	till	0.25-0.5	black	Ilmenite	0.08	51.98	0.05	0.07	47.58	0.81	0.50	0.02	0.00	0.02	101.10
T693	9	94BCW3195	till	0.25-0.5	black	Ilmenite	0.10	52.07	0.04	0.07	47.81	0.59	0.30	0.00	0.00	0.01	101.00
T693	5	94BCW3195	till	0.25-0.5	black	Ilmenite	0.07	52.66	0.05	0.08	46.52	0.99	0.19	0.03	0.01	0.00	100.60
T693	4	94BCW3195	till	0.25-0.5	black	Ilmenite	0.10	53.55	0.02	0.09	44.80	2.56	0.09	0.00	0.00	0.01	101.22
T693	2	94BCW3195	till	0.25-0.5	black	Ilmenite	0.12	54.05	0.04	0.10	45.18	0.12	1.55	0.01	0.00	0.01	101.18
T671	112	94BCW3196	till	0.25-0.5	black	ilmenite	0.00	52.16	0.02	0.01	46.19	0.82	0.41	0.02	0.04	0.00	99.65
T671	113	94BCW3196	till	0.25-0.5	black	ilmenite	0.00	49.87	0.04	0.02	48.02	0.87	0.19	0.02	0.00	0.01	99.02
T672	53	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	47.08	0.01	0.00	46.66	3.33	0.46	0.01	0.00	0.00	97.55
T672	54	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	49.70	0.05	0.00	46.84	0.42	0.30	0.00	0.00	0.02	97.33
T672	59	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	48.44	0.09	0.00	48.45	0.50	0.41	0.02	0.00	0.00	97.91
T672	51	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	49.23	0.10	0.00	47.17	0.43	0.50	0.01	0.00	0.00	97.45
T672	48	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	52.35	0.04	0.01	44.19	2.78	0.08	0.00	0.00	0.01	99.44
T672	55	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	52.63	0.02	0.01	44.30	2.81	0.15	0.03	0.00	0.01	99.95
T672	46	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	49.61	0.10	0.04	47.16	0.54	0.25	0.01	0.04	0.01	97.76

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	52	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	48.51	0.09	0.04	48.14	0.76	0.29	0.00	0.00	0.01	97.85
T672	57	94BCW3200	till	0.25-0.5	black	ilmenite	0.08	50.02	0.09	0.05	46.16	0.50	0.91	0.02	0.00	0.01	97.83
T672	47	94BCW3200	till	0.25-0.5	black	ilmenite	0.00	48.99	0.10	0.05	48.12	0.47	0.51	0.00	0.00	0.00	98.24
T672	49	94BCW3200	till	0.25-0.5	black	Mg-ilmenite	0.00	51.56	0.35	4.64	28.07	0.28	13.02	0.02	0.00	0.02	97.96
T672	80	94BCW3201	till	0.25-0.5	black	ilmenite	0.12	44.88	0.02	0.00	51.46	0.41	0.07	0.02	0.01	0.02	97.01
T672	84	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	51.57	0.08	0.01	45.39	1.09	0.15	0.00	0.00	0.00	98.30
T672	75	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	49.55	0.07	0.02	46.74	0.61	0.40	0.02	0.00	0.00	97.40
T672	77	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	45.67	0.05	0.02	49.09	1.20	1.24	0.01	0.00	0.01	97.28
T672	85	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	46.75	0.05	0.02	49.52	0.49	0.66	0.00	0.02	0.01	97.51
T672	86	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	51.78	0.04	0.03	46.20	0.23	0.29	0.01	0.03	0.00	98.62
T672	79	94BCW3201	till	0.25-0.5	black	ilmenite	0.15	49.65	0.05	0.03	47.27	0.43	0.41	0.01	0.00	0.01	98.01
T672	87	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	52.29	0.03	0.03	45.69	0.25	0.64	0.04	0.00	0.00	98.97
T672	78	94BCW3201	till	0.25-0.5	black	ilmenite	0.00	48.30	0.08	0.04	47.87	0.42	0.69	0.03	0.00	0.02	97.44
T672	93	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	49.65	0.04	0.00	47.62	0.39	0.29	0.01	0.02	0.00	98.03
T672	94	94BCW3202	till	0.25-0.5	black	ilmenite	0.02	52.05	0.06	0.00	45.55	0.94	0.47	0.02	0.00	0.00	99.11
T672	99	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	51.66	0.02	0.01	46.73	0.26	0.22	0.01	0.00	0.02	98.92
T672	103	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	50.19	0.03	0.01	47.38	0.60	0.08	0.03	0.00	0.01	98.32
T672	104	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	48.37	0.00	0.01	46.40	3.01	0.19	0.01	0.00	0.01	98.01
T672	90	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	51.78	0.04	0.01	44.62	2.70	0.05	0.04	0.00	0.00	99.24
T672	91	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	49.66	0.08	0.02	47.54	0.70	0.19	0.01	0.03	0.00	98.22
T672	98	94BCW3202	till	0.25-0.5	black	ilmenite	0.04	46.03	0.05	0.03	48.93	0.99	1.04	0.02	0.00	0.00	97.14
T672	102	94BCW3202	till	0.25-0.5	black	ilmenite	0.06	51.78	0.03	0.04	46.00	0.31	0.52	0.02	0.00	0.01	98.76
T672	100	94BCW3202	till	0.25-0.5	black	ilmenite	0.01	51.03	0.05	0.05	45.31	2.14	0.18	0.07	0.02	0.00	98.87
T672	101	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	50.00	0.06	0.06	46.59	0.42	0.59	0.02	0.02	0.01	97.77
T672	96	94BCW3202	till	0.25-0.5	black	ilmenite	0.02	52.77	0.08	0.08	45.10	0.09	1.24	0.01	0.02	0.00	99.40
T672	97	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	45.12	0.06	0.08	49.44	1.59	0.35	0.00	0.00	0.00	96.64
T672	92	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	51.99	0.03	0.09	45.51	0.23	0.61	0.01	0.01	0.00	98.46
T672	89	94BCW3202	till	0.25-0.5	black	ilmenite	0.00	51.53	0.07	0.19	46.23	0.56	0.11	0.02	0.00	0.01	98.70
T672	107	94BCW3203	till	0.25-0.5	black	ilmenite	0.15	50.28	0.08	0.00	46.78	0.42	0.36	0.00	0.00	0.01	98.08
T672	114	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	52.23	0.05	0.00	47.20	0.51	0.11	0.00	0.00	0.00	100.09
T672	113	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	51.73	0.02	0.00	45.46	0.44	0.50	0.00	0.02	0.00	98.16
T672	110	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	51.93	0.05	0.01	45.62	0.20	0.50	0.01	0.00	0.01	98.31
T672	115	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	49.24	0.07	0.01	47.37	0.47	0.52	0.03	0.01	0.01	97.73
T672	109	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	52.03	0.02	0.03	44.74	1.11	0.34	0.03	0.00	0.00	98.31
T672	112	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	50.06	0.09	0.03	46.24	0.54	0.83	0.00	0.02	0.00	97.83
T672	116	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	50.02	0.04	0.03	47.05	0.59	0.10	0.01	0.04	0.00	97.87
T672	108	94BCW3203	till	0.25-0.5	black	ilmenite	0.00	49.77	0.10	0.04	47.02	0.50	0.57	0.00	0.00	0.00	98.01
T672	119	94BCW3204	till	0.25-0.5	black	ilmenite	0.00	50.93	0.02	0.00	44.56	2.65	0.09	0.04	0.02	0.00	98.30
T672	118	94BCW3204	till	0.25-0.5	black	ilmenite	0.00	51.08	0.01	0.01	45.77	1.42	0.10	0.01	0.00	0.01	98.42
T672	120	94BCW3204	till	0.25-0.5	black	ilmenite	0.66	53.41	0.10	0.02	32.94	3.59	0.09	0.02	0.00	0.02	90.84
T672	122	94BCW3204	till	0.25-0.5	black	ilmenite	0.00	51.46	0.08	0.04	46.08	0.57	0.20	0.04	0.00	0.00	98.46
T693	74	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	47.64	0.04	0.00	50.30	1.72	0.05	0.03	0.00	0.01	99.90
T693	88	94BCW3205	till	0.25-0.5	black	Ilmenite	0.17	53.00	0.08	0.00	46.74	0.64	0.65	0.03	0.00	0.01	101.31

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T693	95	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	52.64	0.07	0.02	47.98	0.54	0.27	0.02	0.00	0.00	101.66
T693	79	94BCW3205	till	0.25-0.5	black	Ilmenite	0.09	54.06	0.04	0.03	46.77	0.50	0.24	0.00	0.00	0.00	101.73
T693	103	94BCW3205	till	0.25-0.5	black	Ilmenite	0.66	51.73	0.10	0.03	45.94	1.18	0.12	0.77	0.01	0.02	100.56
T693	85	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	47.41	0.06	0.03	50.21	1.50	0.50	0.02	0.00	0.02	99.85
T693	68	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	54.30	0.03	0.04	45.00	2.55	0.07	0.00	0.00	0.00	102.12
T693	86	94BCW3205	till	0.25-0.5	black	Ilmenite	0.03	53.23	0.07	0.04	48.45	0.61	0.14	0.01	0.00	0.01	102.58
T693	104	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	52.14	0.06	0.04	47.46	0.70	0.26	0.02	0.04	0.01	100.83
T693	52	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	49.08	0.06	0.04	48.90	1.78	0.95	0.00	0.00	0.00	100.93
T693	82	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	49.50	0.05	0.04	47.85	3.26	0.32	0.01	0.00	0.00	101.13
T693	64	94BCW3205	till	0.25-0.5	black	Ilmenite	0.14	50.53	0.12	0.04	48.57	0.44	0.33	0.01	0.00	0.00	100.18
T693	65	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	50.89	0.11	0.05	47.28	0.49	0.95	0.01	0.00	0.00	99.87
T693	76	94BCW3205	till	0.25-0.5	black	Ilmenite	0.12	49.04	0.22	0.05	48.48	2.59	0.06	0.03	0.00	0.00	100.56
T693	84	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	43.00	0.05	0.05	54.96	0.65	0.56	0.01	0.00	0.00	99.36
T693	50	94BCW3205	till	0.25-0.5	black	Ilmenite	0.12	47.48	0.08	0.05	49.21	1.63	1.05	0.02	0.00	0.01	99.65
T693	69	94BCW3205	till	0.25-0.5	black	Ilmenite	0.16	49.24	0.05	0.05	49.55	2.05	0.54	0.04	0.00	0.02	101.69
T693	90	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	50.44	0.11	0.05	48.62	0.48	0.31	0.02	0.00	0.00	100.15
T693	99	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	52.19	0.05	0.05	48.24	0.58	0.15	0.02	0.00	0.01	101.39
T693	98	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	51.65	0.03	0.05	47.11	1.58	0.15	0.02	0.00	0.00	100.71
T693	77	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	49.21	0.05	0.06	47.98	2.94	0.27	0.00	0.02	0.00	100.65
T693	75	94BCW3205	till	0.25-0.5	black	Ilmenite	0.13	50.21	0.05	0.06	47.57	1.96	0.01	0.04	0.00	0.00	100.03
T693	59	94BCW3205	till	0.25-0.5	black	Ilmenite	0.10	47.35	0.03	0.07	50.46	1.45	0.43	0.03	0.00	0.02	99.94
T693	63	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	53.48	0.11	0.07	45.75	1.77	0.17	0.01	0.00	0.00	101.45
T693	101	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	51.60	0.07	0.07	48.24	0.55	0.38	0.00	0.00	0.01	101.02
T693	49	94BCW3205	till	0.25-0.5	black	Ilmenite	0.12	51.99	0.08	0.07	49.12	0.41	0.21	0.01	0.00	0.01	102.02
T693	70	94BCW3205	till	0.25-0.5	black	Ilmenite	0.08	51.41	0.16	0.08	48.64	0.48	0.28	0.00	0.00	0.01	101.13
T693	92	94BCW3205	till	0.25-0.5	black	Ilmenite	0.11	50.75	0.24	0.09	48.84	0.48	0.62	0.02	0.01	0.00	101.16
T693	60	94BCW3205	till	0.25-0.5	black	Mg-Ilmenite	0.11	52.32	0.38	5.48	29.09	0.34	12.78	0.02	0.00	0.00	100.50
T693	48	94BCW3205	till	0.25-0.5	black	Mg-Ilmenite	0.12	52.10	0.30	5.82	29.88	0.27	12.14	0.04	0.02	0.02	100.71
T673	18	94BCW3206	till	0.25-0.5	black	ilmenite	0.00	47.95	0.05	0.00	49.52	0.70	1.06	0.02	0.02	0.01	99.32
T673	22	94BCW3206	till	0.25-0.5	black	ilmenite	0.07	46.72	0.08	0.00	49.06	0.87	1.37	0.01	0.04	0.02	98.24
T673	23	94BCW3206	till	0.25-0.5	black	ilmenite	0.05	51.54	0.07	0.00	47.55	0.22	0.36	0.03	0.05	0.01	99.87
T673	27	94BCW3206	till	0.25-0.5	black	ilmenite	0.00	50.69	0.04	0.00	47.01	0.67	0.11	0.01	0.12	0.01	98.65
T673	35	94BCW3206	till	0.25-0.5	black	ilmenite	0.00	48.56	0.06	0.01	48.56	1.34	0.10	0.00	0.00	0.00	98.64
T673	33	94BCW3206	till	0.25-0.5	black	ilmenite	0.01	51.18	0.04	0.01	47.00	1.36	0.02	0.03	0.00	0.01	99.67
T673	17	94BCW3206	till	0.25-0.5	black	ilmenite	0.00	51.44	0.06	0.02	46.29	1.64	0.09	0.01	0.05	0.00	99.60
T673	20	94BCW3206	till	0.25-0.5	black	ilmenite	0.01	51.95	0.05	0.02	47.21	1.08	0.10	0.01	0.00	0.00	100.42
T673	32	94BCW3206	till	0.25-0.5	black	ilmenite	0.09	51.07	0.03	0.04	46.14	1.76	0.13	0.04	0.00	0.01	99.31
T673	24	94BCW3206	till	0.25-0.5	black	ilmenite	0.12	50.80	0.09	0.05	47.86	0.55	0.58	0.00	0.00	0.00	100.04
T673	30	94BCW3206	till	0.25-0.5	black	ilmenite	0.00	51.95	0.05	0.07	45.72	0.24	1.18	0.01	0.11	0.02	99.35
T673	16	94BCW3206	till	0.25-0.5	black	ilmenite	0.01	50.34	0.04	0.07	48.07	0.50	0.52	0.01	0.07	0.00	99.62
T673	25	94BCW3206	till	0.25-0.5	black	ilmenite	0.07	51.89	0.06	0.11	46.40	0.39	0.65	0.01	0.00	0.00	99.58
T673	34	94BCW3206	till	0.25-0.5	black	ilmenite	0.03	49.25	0.06	0.13	48.46	0.29	1.26	0.03	0.00	0.01	99.51
T673	46	94BCW3207	till	0.25-0.5	black	ilmenite	0.04	49.49	0.06	0.00	49.20	0.70	0.24	0.03	0.01	0.01	99.77

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	49	94BCW3207	till	0.25-0.5	black	ilmenite	0.09	49.75	0.06	0.00	48.74	1.03	0.54	0.03	0.00	0.01	100.24
T673	51	94BCW3207	till	0.25-0.5	black	ilmenite	0.03	51.78	0.03	0.00	45.93	1.01	0.08	0.00	0.01	0.00	98.88
T673	52	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	52.53	0.00	0.00	47.20	0.46	0.14	0.02	0.00	0.01	100.36
T673	54	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	51.58	0.03	0.00	45.95	2.32	0.12	0.00	0.00	0.02	100.00
T673	61	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.55	0.06	0.00	48.13	0.50	0.23	0.01	0.00	0.02	99.49
T673	62	94BCW3207	till	0.25-0.5	black	ilmenite	0.01	50.15	0.05	0.00	46.96	2.08	0.45	0.02	0.00	0.00	99.71
T673	63	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	51.01	0.06	0.00	47.58	0.48	0.54	0.02	0.01	0.01	99.70
T673	66	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.05	0.05	0.00	48.67	0.48	0.23	0.03	0.00	0.00	99.51
T673	78	94BCW3207	till	0.25-0.5	black	ilmenite	0.02	50.32	0.05	0.00	48.19	1.07	0.07	0.00	0.01	0.03	99.75
T673	88	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.33	0.08	0.00	48.24	0.54	0.40	0.03	0.00	0.02	99.63
T673	89	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.41	0.06	0.00	48.11	1.55	0.10	0.01	0.01	0.00	100.24
T673	93	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	47.48	0.06	0.00	49.82	1.92	0.07	0.03	0.00	0.00	99.36
T673	71	94BCW3207	till	0.25-0.5	black	ilmenite	0.07	48.09	0.04	0.01	48.50	1.99	0.20	0.02	0.05	0.00	98.97
T673	87	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.93	0.08	0.01	47.66	0.42	0.63	0.01	0.00	0.01	99.75
T673	56	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	51.98	0.05	0.02	46.88	0.28	0.08	0.00	0.00	0.00	99.29
T673	67	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.79	0.06	0.02	48.44	0.57	0.18	0.03	0.00	0.00	100.10
T673	47	94BCW3207	till	0.25-0.5	black	ilmenite	0.02	51.94	0.03	0.02	47.14	0.49	0.35	0.01	0.00	0.01	100.01
T673	90	94BCW3207	till	0.25-0.5	black	ilmenite	0.01	48.00	0.05	0.02	49.53	0.94	0.47	0.03	0.01	0.00	99.06
T673	50	94BCW3207	till	0.25-0.5	black	ilmenite	0.07	49.22	0.03	0.02	46.14	3.29	0.09	0.02	0.05	0.00	98.91
T673	85	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.41	0.05	0.02	48.22	0.68	0.12	0.00	0.00	0.00	99.50
T673	76	94BCW3207	till	0.25-0.5	black	ilmenite	0.09	47.98	0.03	0.03	49.01	0.60	1.41	0.00	0.00	0.01	99.16
T673	83	94BCW3207	till	0.25-0.5	black	ilmenite	0.06	46.35	0.07	0.03	50.76	1.00	0.74	0.00	0.01	0.00	99.02
T673	77	94BCW3207	till	0.25-0.5	black	ilmenite	0.06	47.73	0.08	0.04	50.33	0.37	0.64	0.01	0.00	0.00	99.24
T673	80	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	48.06	0.09	0.04	48.95	1.21	1.16	0.01	0.01	0.00	99.51
T673	70	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.78	0.05	0.04	48.61	0.40	0.32	0.01	0.00	0.01	100.21
T673	74	94BCW3207	till	0.25-0.5	black	ilmenite	0.01	50.24	0.06	0.04	47.58	0.53	0.60	0.01	0.01	0.02	99.10
T673	65	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	50.51	0.09	0.05	47.84	0.44	0.49	0.00	0.00	0.01	99.43
T673	48	94BCW3207	till	0.25-0.5	black	ilmenite	0.10	47.65	0.06	0.06	49.96	0.29	0.56	0.02	0.04	0.01	98.75
T673	44	94BCW3207	till	0.25-0.5	black	ilmenite	0.02	50.43	0.09	0.08	48.44	0.59	0.15	0.02	0.00	0.00	99.80
T673	75	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	48.13	0.05	0.09	50.26	0.31	0.53	0.00	0.00	0.00	99.37
T673	91	94BCW3207	till	0.25-0.5	black	ilmenite	0.00	46.78	0.04	0.12	49.22	2.15	0.18	0.03	0.00	0.00	98.51
T673	92	94BCW3207	till	0.25-0.5	black	Mg-ilmenite	0.00	50.81	0.37	5.55	29.50	0.28	12.35	0.01	0.01	0.01	98.88
T673	79	94BCW3207	till	0.25-0.5	black	Mg-ilmenite	0.00	50.93	0.40	5.60	29.76	0.32	12.60	0.03	0.01	0.00	99.65
T674	139	94BCW3208	till	0.25-0.5	black	ilmenite	0.09	50.44	0.06	0.00	48.44	0.73	0.39	0.01	0.00	0.00	100.18
T674	153	94BCW3208	till	0.25-0.5	black	ilmenite	0.05	47.53	0.04	0.00	47.29	5.11	0.08	0.02	0.01	0.01	100.12
T674	156	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	49.46	0.07	0.00	46.01	3.36	0.91	0.03	0.00	0.02	99.87
T674	159	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	50.32	0.05	0.00	47.90	0.62	0.29	0.00	0.00	0.01	99.19
T674	149	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	46.30	0.03	0.00	48.99	3.75	0.03	0.01	0.01	0.00	99.14
T674	142	94BCW3208	till	0.25-0.5	black	ilmenite	0.06	51.66	0.04	0.01	47.69	1.03	0.15	0.01	0.00	0.01	100.66
T674	146	94BCW3208	till	0.25-0.5	black	ilmenite	0.05	51.47	0.03	0.01	46.50	1.67	0.16	0.01	0.00	0.00	99.89
T674	129	94BCW3208	till	0.25-0.5	black	ilmenite	0.02	50.46	0.07	0.01	47.97	0.42	0.71	0.01	0.01	0.00	99.69
T674	157	94BCW3208	till	0.25-0.5	black	ilmenite	0.03	50.49	0.03	0.01	46.64	2.22	0.08	0.01	0.00	0.01	99.52
T674	136	94BCW3208	till	0.25-0.5	black	ilmenite	0.01	50.12	0.05	0.02	48.35	0.51	0.30	0.00	0.01	0.02	99.38

Appendix C.5 Probe data for ilmenites from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	140	94BCW3208	till	0.25-0.5	black	ilmenite	0.05	50.64	0.07	0.02	47.90	0.50	0.33	0.00	0.03	0.00	99.53
T674	160	94BCW3208	till	0.25-0.5	black	ilmenite	0.05	50.62	0.01	0.02	44.92	4.33	0.05	0.00	0.02	0.00	100.02
T674	131	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	45.16	0.05	0.02	50.59	1.13	1.20	0.01	0.02	0.00	98.18
T674	138	94BCW3208	till	0.25-0.5	black	ilmenite	0.07	50.66	0.07	0.02	48.18	0.46	0.38	0.01	0.00	0.01	99.85
T674	137	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	50.82	0.07	0.03	47.73	0.52	0.42	0.00	0.00	0.00	99.60
T674	151	94BCW3208	till	0.25-0.5	black	ilmenite	0.21	47.01	0.05	0.03	49.80	2.17	0.24	0.04	0.00	0.00	99.54
T674	150	94BCW3208	till	0.25-0.5	black	ilmenite	0.02	50.87	0.10	0.03	47.74	0.46	0.64	0.01	0.00	0.00	99.87
T674	134	94BCW3208	till	0.25-0.5	black	ilmenite	0.15	46.44	0.23	0.03	50.66	1.43	0.16	0.02	0.00	0.00	99.10
T674	154	94BCW3208	till	0.25-0.5	black	ilmenite	0.06	52.29	0.04	0.03	45.83	1.56	0.07	0.01	0.00	0.00	99.88
T674	135	94BCW3208	till	0.25-0.5	black	ilmenite	0.03	48.22	0.05	0.04	50.18	1.01	0.44	0.00	0.00	0.00	99.97
T674	155	94BCW3208	till	0.25-0.5	black	ilmenite	0.02	50.60	0.07	0.05	47.77	0.56	0.34	0.03	0.00	0.00	99.44
T674	132	94BCW3208	till	0.25-0.5	black	ilmenite	0.06	51.81	0.03	0.06	47.58	0.50	0.19	0.01	0.00	0.00	100.24
T674	130	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	49.75	0.05	0.15	48.95	0.51	0.12	0.01	0.00	0.03	99.56
T674	161	94BCW3208	till	0.25-0.5	black	ilmenite	0.08	51.01	0.03	0.16	47.32	0.46	0.76	0.02	0.00	0.00	99.84
T674	162	94BCW3208	till	0.25-0.5	black	ilmenite	0.00	47.66	0.04	0.17	48.69	2.27	0.05	0.02	0.00	0.01	98.91
T675	72	94BCW3209	till	0.25-0.5	black	ilmenite	0.02	49.53	0.06	0.00	47.37	0.44	0.54	0.02	0.01	0.00	97.98
T675	73	94BCW3209	till	0.25-0.5	black	ilmenite	0.05	48.49	0.03	0.00	47.07	2.35	0.04	0.02	0.00	0.01	98.07
T675	75	94BCW3209	till	0.25-0.5	black	ilmenite	0.69	47.53	0.04	0.00	46.85	2.47	0.08	0.01	0.00	0.00	97.66
T675	67	94BCW3209	till	0.25-0.5	black	ilmenite	0.00	46.80	0.06	0.02	49.82	0.34	0.70	0.04	0.00	0.00	97.78
T675	65	94BCW3209	till	0.25-0.5	black	ilmenite	0.00	47.69	0.12	0.03	48.36	0.96	0.41	0.02	0.00	0.01	97.59
T675	71	94BCW3209	till	0.25-0.5	black	ilmenite	0.02	49.90	0.08	0.03	47.44	0.55	0.51	0.02	0.04	0.01	98.59
T675	76	94BCW3209	till	0.25-0.5	black	ilmenite	0.00	51.45	0.02	0.05	45.86	0.67	0.40	0.00	0.01	0.00	98.45
T675	64	94BCW3209	till	0.25-0.5	black	ilmenite	0.00	47.36	0.04	0.12	49.15	0.84	0.03	0.02	0.00	0.00	97.56
T712	103	94BCW3209	till	0.5-0.84	black	ilmenite	0.02	53.38	0.02	0.03	45.53	1.74	0.08	0.01	0.00	0.00	100.81
T725	60	94BCW3215	kimberlite	0.25-0.5	black	Mg-ilmenite	0.12	50.20	0.38	6.78	28.60	0.33	12.64	0.03	0.00	0.01	99.10
T726	57	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	52.79	0.35	4.63	28.82	0.33	13.07	0.04	0.00	0.01	100.15
T726	55	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.13	54.01	0.34	5.36	25.78	0.36	14.71	0.02	0.02	0.00	100.73
T726	58	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	50.66	0.30	5.62	29.69	0.28	12.33	0.03	0.02	0.00	99.02
T726	54	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.09	50.71	0.30	5.67	29.81	0.27	12.39	0.04	0.00	0.01	99.28
T726	66	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	51.73	0.23	6.24	26.32	0.32	14.07	0.09	0.00	0.00	99.11
T726	62	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.08	51.41	0.40	6.44	27.37	0.30	13.46	0.03	0.00	0.01	99.49
T726	64	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.19	50.81	0.40	6.74	28.49	0.31	12.40	0.04	0.00	0.00	99.37
T726	53	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	50.83	0.40	6.80	28.81	0.32	12.46	0.03	0.02	0.01	99.78
T726	56	94BCW3215	kimberlite	0.5-0.84	black	Mg-ilmenite	0.09	50.86	0.39	6.83	28.65	0.27	12.65	0.04	0.00	0.00	99.77
T727	21	94BCW3215	kimberlite	0.84-2.0	black	Mg-ilmenite	0.84	58.42	0.13	2.39	13.56	0.44	18.26	5.18	0.13	0.03	99.37
T727	25	94BCW3215	kimberlite	0.84-2.0	black	Mg-ilmenite	0.06	50.76	0.43	6.74	28.72	0.34	12.52	0.02	0.00	0.00	99.59
T727	27	94BCW3215	kimberlite	0.84-2.0	black	Mg-ilmenite	0.09	51.26	0.39	6.76	28.71	0.35	12.63	0.04	0.00	0.02	100.24
T727	24	94BCW3215	kimberlite	0.84-2.0	black	Mg-ilmenite	0.12	50.96	0.40	6.79	29.03	0.32	12.47	0.01	0.02	0.01	100.12
T727	22	94BCW3215	kimberlite	0.84-2.0	black	Mg-ilmenite	0.08	51.17	0.42	6.79	28.78	0.31	12.67	0.00	0.00	0.00	100.22

Appendix C.6 Probe data for olivines from kimbelite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T705	38	94BCW3104	till	0.5-0.84	pl green	Olivine	39.80	0.00	0.03	0.04	8.97	0.13	50.67	0.05	0.00	0.00	99.70
T705	39	94BCW3104	till	0.5-0.84	pl green	Olivine	40.61	0.00	0.01	0.08	8.16	0.11	50.97	0.06	0.00	0.01	100.01
T705	40	94BCW3104	till	0.5-0.84	pl green	Olivine	40.25	0.05	0.04	0.08	8.43	0.13	51.12	0.04	0.00	0.01	100.14
T705	64	94BCW3105	till	0.5-0.84	pl green	Olivine	40.17	0.00	0.03	0.07	8.62	0.12	50.99	0.06	0.00	0.01	100.07
T705	65	94BCW3105	till	0.5-0.84	pl green	Olivine	40.27	0.07	0.03	0.04	8.73	0.14	51.38	0.05	0.00	0.01	100.72
T705	68	94BCW3107	till	0.5-0.84	pl green	Olivine	40.28	0.01	0.02	0.04	9.47	0.09	50.06	0.06	0.01	0.00	100.05
T705	107	94BCW3120	till	0.5-0.84	pl green	Olivine	39.66	0.01	0.03	0.06	8.73	0.09	50.21	0.06	0.00	0.01	98.85
T705	108	94BCW3120	till	0.5-0.84	pl green	Olivine	39.52	0.03	0.03	0.08	9.98	0.09	49.79	0.06	0.01	0.00	99.59
T686	96	94BCW3129	till	0.25-0.5	pl green	Olivine	40.54	0.00	0.03	0.03	7.06	0.19	51.14	0.04	0.00	0.01	99.03
T686	97	94BCW3129	till	0.25-0.5	pl green	Olivine	39.34	0.03	0.04	0.05	8.72	0.12	50.09	0.05	0.00	0.00	98.45
T686	99	94BCW3129	till	0.25-0.5	pl green	Olivine	39.55	0.03	0.05	0.05	8.20	0.09	50.66	0.06	0.00	0.02	98.70
T686	100	94BCW3129	till	0.25-0.5	pl green	Olivine	40.22	0.00	0.04	0.06	8.34	0.12	50.74	0.03	0.00	0.00	99.53
T686	102	94BCW3129	till	0.25-0.5	pl green	Olivine	40.10	0.04	0.04	0.10	8.74	0.13	50.42	0.06	0.00	0.00	99.62
T706	94	94BCW3129	till	0.5-0.84	pl green	Olivine	40.54	0.05	0.00	0.05	6.97	0.07	52.28	0.03	0.00	0.02	100.01
T706	95	94BCW3129	till	0.5-0.84	pl green	Olivine	40.03	0.00	0.03	0.05	7.94	0.13	51.44	0.04	0.00	0.02	99.69
T706	96	94BCW3129	till	0.5-0.84	pl green	Olivine	39.95	0.00	0.02	0.03	7.81	0.09	51.26	0.04	0.00	0.00	99.20
T706	97	94BCW3129	till	0.5-0.84	pl green	Olivine	40.44	0.01	0.03	0.06	7.62	0.14	51.19	0.05	0.00	0.00	99.53
T688	106	94BCW3138	till	0.25-0.5	pl green	Olivine	39.96	0.03	0.01	0.07	8.48	0.13	50.20	0.05	0.00	0.00	98.93
T688	107	94BCW3138	till	0.25-0.5	pl green	Olivine	39.52	0.03	0.04	0.06	9.03	0.14	50.25	0.06	0.00	0.02	99.14
T688	110	94BCW3138	till	0.25-0.5	pl green	Olivine	40.23	0.00	0.04	0.05	10.14	0.09	48.73	0.04	0.01	0.01	99.34
T666	95	94BCW3147	till	0.25-0.5	pl green	Olivine	39.96	0.03	0.03	0.04	8.48	0.12	50.57	0.05	0.01	0.00	99.30
T690	121	94BCW3156	till	0.25-0.5	pl green	Olivine	39.48	0.05	0.00	0.04	8.24	0.13	49.71	0.03	0.00	0.00	97.69
T707	93	94BCW3156	till	0.5-0.84	pl green	Olivine	40.36	0.09	0.03	0.05	8.77	0.16	51.22	0.03	0.00	0.01	100.72
T707	95	94BCW3161	till	0.5-0.84	pl green	Olivine	39.82	0.02	0.03	0.03	8.95	0.15	51.25	0.03	0.00	0.02	100.30
T667	120	94BCW3166	till	0.25-0.5	pale green	Olivine	41.35	0.03	0.02	0.00	7.01	0.08	52.82	0.01	0.00	0.00	101.32
T667	121	94BCW3166	till	0.25-0.5	pale green	Olivine	40.69	0.03	0.02	0.01	7.97	0.18	50.74	0.08	0.00	0.00	99.70
T707	108	94BCW3166	till	0.5-0.84	pl green	Olivine	40.45	0.00	0.01	0.05	7.56	0.11	51.71	0.02	0.00	0.00	99.90
T707	109	94BCW3166	till	0.5-0.84	pl green	Olivine	40.00	0.04	0.02	0.07	8.71	0.15	50.57	0.06	0.00	0.00	99.63
T708	16	94BCW3178	till	0.5-0.84	pl green	Olivine	39.70	0.05	0.04	0.06	8.69	0.12	49.97	0.07	0.00	0.01	98.70
T708	49	94BCW3187	till	0.5-0.84	pl green	Olivine	39.92	0.01	0.03	0.04	8.75	0.10	49.51	0.03	0.00	0.00	98.38
T708	83	94BCW3192	till	0.5-0.84	pl green	Olivine	40.64	0.00	0.04	0.04	8.38	0.10	49.27	0.05	0.00	0.00	98.52
T671	30	94BCW3194	till	0.25-0.5	pl green	Olivine	40.10	0.04	0.00	0.02	8.54	0.14	50.65	0.04	0.00	0.03	99.57
T671	31	94BCW3194	till	0.25-0.5	pl green	Olivine	39.89	0.03	0.03	0.03	9.28	0.10	50.14	0.03	0.00	0.00	99.52
T671	32	94BCW3194	till	0.25-0.5	pl green	Olivine	39.83	0.02	0.03	0.04	8.99	0.09	49.81	0.05	0.00	0.01	98.86
T671	33	94BCW3194	till	0.25-0.5	pl green	Olivine	39.68	0.07	0.00	0.01	9.33	0.17	50.13	0.04	0.00	0.02	99.44
T709	92	94BCW3194	till	0.5-0.84	pl green	Olivine	40.74	0.08	0.03	0.09	8.40	0.12	50.23	0.05	0.00	0.01	99.75
T709	93	94BCW3194	till	0.5-0.84	pl green	Olivine	40.11	0.04	0.04	0.07	8.63	0.09	50.16	0.09	0.00	0.00	99.23
T709	94	94BCW3194	till	0.5-0.84	pl green	Olivine	40.75	0.04	0.03	0.03	8.94	0.15	49.47	0.04	0.00	0.00	99.44
T711	24	94BCW3195	till	0.5-0.84	pl green	Olivine	40.73	0.06	0.04	0.04	7.55	0.12	51.61	0.06	0.00	0.00	100.20
T711	25	94BCW3195	till	0.5-0.84	pl green	Olivine	40.85	0.06	0.03	0.05	8.43	0.17	51.72	0.05	0.00	0.01	101.37

Appendix C.6 Probe data for olivines from kimbelite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O3	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T711	43	94BCW3198	till	0.5-0.84	pl green	Olivine	40.30	0.06	0.01	0.08	8.85	0.12	51.23	0.04	0.00	0.01	100.69
T711	48	94BCW3199	till	0.5-0.84	pl green	Olivine	40.83	0.00	0.04	0.08	8.51	0.10	51.57	0.07	0.01	0.01	101.23
T711	49	94BCW3199	till	0.5-0.84	pl green	Olivine	40.17	0.02	0.03	0.06	8.06	0.12	51.22	0.04	0.00	0.02	99.73
T711	75	94BCW3201	till	0.5-0.84	pl green	Olivine	39.40	0.03	0.00	0.07	9.94	0.10	50.51	0.06	0.00	0.01	100.12
T711	76	94BCW3201	till	0.5-0.84	pl green	Olivine	39.01	0.00	0.04	0.06	8.39	0.10	47.38	0.06	0.01	0.00	95.05
T711	77	94BCW3201	till	0.5-0.84	pl green	Olivine	42.57	0.00	1.03	0.07	8.66	0.10	50.16	0.12	0.00	0.02	102.73
T693	112	94BCW3205	till	0.25-0.5	pale green	Olivine	40.46	0.02	0.00	0.06	8.78	0.12	50.02	0.03	0.00	0.00	99.50
T693	113	94BCW3205	till	0.25-0.5	pale green	Olivine	40.56	0.00	0.03	0.06	8.87	0.11	50.07	0.05	0.00	0.00	99.75
T693	114	94BCW3205	till	0.25-0.5	pale green	Olivine	40.50	0.10	0.03	0.04	9.38	0.13	49.45	0.04	0.00	0.01	99.68
T693	115	94BCW3205	till	0.25-0.5	pale green	Olivine	40.75	0.00	0.01	0.03	8.16	0.11	50.15	0.04	0.00	0.01	99.24
T693	116	94BCW3205	till	0.25-0.5	pale green	Olivine	40.55	0.06	0.06	0.06	8.71	0.12	50.30	0.05	0.00	0.01	99.91
T693	117	94BCW3205	till	0.25-0.5	pale green	Olivine	40.61	0.04	0.02	0.07	8.37	0.13	50.70	0.05	0.01	0.02	100.02
T693	118	94BCW3205	till	0.25-0.5	pale green	Olivine	40.08	0.05	0.03	0.04	10.23	0.16	49.19	0.02	0.00	0.01	99.81
T710	41	94BCW3205	till	0.5-0.84	pl green	Olivine	40.32	0.00	0.03	0.06	8.68	0.15	51.22	0.04	0.02	0.00	100.52
T710	47	94BCW3205	till	0.5-0.84	pl green	Olivine	39.93	0.06	0.00	0.03	8.52	0.16	50.62	0.04	0.01	0.00	99.38
T710	48	94BCW3205	till	0.5-0.84	pl green	Olivine	40.74	0.06	0.02	0.04	9.25	0.13	50.44	0.06	0.00	0.02	100.75
T710	49	94BCW3205	till	0.5-0.84	pl green	Olivine	41.15	0.07	0.03	0.05	9.35	0.12	50.13	0.02	0.00	0.00	100.92
T710	50	94BCW3205	till	0.5-0.84	pl green	Olivine	40.35	0.00	0.02	0.07	8.86	0.13	50.74	0.05	0.01	0.00	100.22
T710	51	94BCW3205	till	0.5-0.84	pl green	Olivine	41.11	0.03	0.01	0.04	7.31	0.10	52.20	0.04	0.00	0.02	100.85
T710	52	94BCW3205	till	0.5-0.84	pl green	Olivine	40.44	0.00	0.01	0.04	8.67	0.14	50.53	0.02	0.00	0.01	99.87
T674	18	94BCW3207	till	0.25-0.5	pl green	Olivine	40.37	0.02	0.03	0.03	7.68	0.11	51.24	0.05	0.00	0.00	99.53
T674	19	94BCW3207	till	0.25-0.5	pl green	Olivine	40.04	0.04	0.03	0.04	9.42	0.12	49.88	0.06	0.00	0.01	99.65
T674	20	94BCW3207	till	0.25-0.5	pl green	Olivine	40.21	0.04	0.02	0.03	7.95	0.15	51.01	0.04	0.00	0.00	99.44
T674	21	94BCW3207	till	0.25-0.5	pl green	Olivine	40.07	0.01	0.04	0.04	8.74	0.13	50.49	0.05	0.01	0.00	99.57
T674	22	94BCW3207	till	0.25-0.5	pl green	Olivine	40.18	0.02	0.00	0.04	7.82	0.12	51.01	0.03	0.00	0.01	99.23
T674	23	94BCW3207	till	0.25-0.5	pl green	Olivine	39.86	0.01	0.02	0.00	8.99	0.11	50.09	0.06	0.00	0.01	99.14
T674	25	94BCW3207	till	0.25-0.5	pl green	Olivine	39.93	0.02	0.02	0.06	7.90	0.06	50.86	0.03	0.00	0.02	98.89
T712	43	94BCW3207	till	0.5-0.84	pl green	Olivine	40.28	0.00	0.02	0.06	8.16	0.15	49.50	0.05	0.00	0.00	98.22
T712	44	94BCW3207	till	0.5-0.84	pl green	Olivine	39.77	0.04	0.02	0.04	8.68	0.15	49.12	0.04	0.00	0.01	97.88
T712	82	94BCW3208	till	0.5-0.84	pl green	Olivine	39.21	0.04	0.03	0.07	9.11	0.10	50.20	0.05	0.00	0.02	98.84
T725	32	94BCW3215	kimberlite	0.25-0.5	pale yellow	Olivine	40.88	0.07	0.02	0.05	7.88	0.12	51.15	0.05	0.00	0.00	100.21
T725	33	94BCW3215	kimberlite	0.25-0.5	pale yellow	Olivine	40.06	0.00	0.04	0.06	8.23	0.10	51.27	0.04	0.00	0.00	99.80
T725	34	94BCW3215	kimberlite	0.25-0.5	pale yellow	Olivine	39.98	0.00	0.01	0.09	8.21	0.14	51.04	0.02	0.00	0.00	99.49
T725	35	94BCW3215	kimberlite	0.25-0.5	pale yellow	Olivine	40.42	0.00	0.04	0.06	7.43	0.13	51.65	0.05	0.00	0.01	99.79
T725	43	94BCW3215	kimberlite	0.25-0.5	orange	Olivine	40.21	0.03	0.01	0.02	8.64	0.14	50.35	0.03	0.00	0.00	99.43

Appendix D Pyrope grains with kelyphite rims, orange peel texture and kelyphite along fractures

Appendix D. Number of pyrope grains with kelyphite rims, orange peel texure or altered shear planes

Sample	Distance down ice (km)	Raw Counts: 0.25 to 0.5 mm fraction				Raw Counts: 0.5 to 0.84 mm fraction				Counts as % of total: 0.25 to 0.5 mm fraction				Counts as % of total: 0.5 to 0.84 mm fraction				
		total pyrope	grains with kelyphite rims	grains with orange peel texture	grains with kely. in fractures	total pyrope	grains with kelyphite rims	grains with orange peel texture	grains with kely. in fractures	total pyrope	% grains with kelyphite rims	% grains with orange peel texture	grains with kely. in fractures	total pyrope	% grains with kelyphite rims	% grains with orange peel texture	grains with kely. in fractures	
94BCW3113	-0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3112	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	up-ice
94BCW3114	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3111	-0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3115	-0.45	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
94BCW3171	0.04	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
94BCW3100	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3101	0.10	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0 to 0.2 k
94BCW3103	0.20	9	0	0	0	4	0	3	1	9	0	0	0	4	0	75	25	down-ice
94BCW3104	0.20	17	12	8	4	14	6	6	5	17	71	47	24	14	43	43	36	
94BCW3105	0.20	25	13	14	15	8	2	2	2	25	52	56	60	8	25	25	25	
94BCW3106	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3107	0.20	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	
94BCW3108	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3109	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3110	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3172	0.20	1	0	1	0	0	0	0	0	1	0	100	0	0	0	0	0	
94BCW3102	0.25	71	7	5	3	9	1	0	7	71	10	7	4	9	11	0	78	
94BCW3161	0.65	10	0	2	2	1	0	0	0	10	0	20	20	1	0	0	0	
94BCW3156	1.00	106	27	58	19	26	12	6	7	106	25	55	18	26	46	23	27	
94BCW3166	2.00	68	29	54	5	3	0	0	0	68	43	79	7	3	0	0	0	1 to 4 km
94BCW3193	2.70	120	53	96	18	68	15	13	17	120	44	80	15	68	22	19	25	down-ice
94BCW3194	4.00	116	43	103	13	22	6	9	4	116	37	89	11	22	27	41	18	
94BCW3195	4.00	73	24	43	0	24	3	9	10	73	33	59	0	24	13	38	42	
94BCW3196	4.00	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	
94BCW3197	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3198	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
94BCW3199	4.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
94BCW3200	4.00	39	6	27	0	6	3	3	0	39	15	69	0	6	50	50	0	
94BCW3201	4.00	10	2	8	0	2	0	0	0	10	20	8	0	2	0	0	0	
94BCW3202	4.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
94BCW3203	4.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
94BCW3204	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Appendix D. Number of pyrope grains with kelyphite rims, orange peel texure or altered shear planes

Sample	Distance down ice (km)	Raw Counts								Counts as % of total								
		0.25 to 0.5 mm fraction				0.5 to 0.84 mm fraction				0.25 to 0.5 mm fraction				0.5 to 0.84 mm fraction				
		total pyrope	grains with kelyphite rims	grains with orange peel texture	grains with kely. in fractures	total pyrope	grains with kelyphite rims	grains with orange peel texture	grains with kely. in fractures	total pyrope	% grains with kelyphite rims	% grains with orange peel texture	grains with kely. in fractures	total pyrope	% grains with kelyphite rims	% grains with orange peel texture	grains with kely. in fractures	
94BCW3192	5.00	163	24	111	31	19	3	5	6	163	15	68	19	19	16	26	32	
94BCW3187	6.15	251	59	208	21	7	3	0	4	251	24	83	8	7	43	0	57	4 to 10 km
94BCW3209	7.20	68	11	55	4	1	0	0	0	68	16	81	6	1	0	0	0	down-ice
94BCW3178	8.45	110	29	94	18	4	0	0	0	110	26	85	16	4	0	0	0	
94BCW3208	10.00	155	29	134	17	12	0	7	2	155	19	86	11	12	0	58	17	
94BCW3120	11.50	135	35	121	9	51	13	10	17	135	26	90	7	51	25	20	33	
94BCW3207	13.10	190	23	94	16	20	1	9	4	190	12	49	8	20	5	45	20	
94BCW3129	14.50	269	92	219	26	25	8	15	6	269	34	81	10	25	32	60	24	10 to 20
94BCW3206	16.00	62	7	37	9	6	0	0	0	62	11	60	15	6	0	0	0	down-ice
94BCW3138	17.80	151	12	18	14	16	3	3	9	151	8	12	9	16	19	19	56	
94BCW3205	19.10	643	144	183	231	108	20	21	63	643	22	28	36	108	19	19	58	
94BCW3147	20.80	58	4	51	1	8	0	0	0	58	7	88	2	8	0	0	0	

(-) indicates up-ice
(+) indicates down-ice

Appendix E Whole rock geochemical data for kimberlite

Appendix E Kimberlite whole rock and trace element data

Sample	Method	KIA93-RL	BCW94-RL
SiO2 wt%	XRF	47.98	43.00
TiO2	XRF	0.19	0.16
Al2O3	XRF	4.32	4.10
Fe2O3(tot)	XRF	9.77	6.60
FE2O3	difference	nd	0.90
FeO	wet chem	nd	5.10
MnO	XRF	0.23	0.08
MgO	XRF	32.94	30.70
CaO	XRF	3.23	1.75
Na2O	XRF	0.00	0.03
K2O	XRF	0.96	0.62
P2O5	XRF	0.14	0.09
CO2t	LECO	nd	2.40
H2Ot	LECO	nd	9.10
S	LECO	nd	0.24
LOI	LOI	10.52	11.50
TOTAL		99.76	98.27
Li ppm	ICP-MS	11.32	nd
Be	ICP-ES	nd	0.9
Rb	ICP-MS	46.48	39
Sr	ICP-MS	200.5	290
Ba	ICP-MS	525	580
Nb	ICP-MS	56	35
Zr	ICP-MS	20.75	51
Hf	ICP-MS	0.50	1.1
Ta	ICP-MS	2.12	1.7
Th	ICP-MS	8.62	5.3
U	ICP-MS	1.39	1.7
Pb	ICP-MS	8.86	8
Sc	ICP-ES	nd	5.7
V	ICP-ES	nd	35
Cr	ICP-ES	nd	1100
Ni	ICP-ES	nd	1400
Co	ICP-ES	nd	66
Cu	ICP-ES	nd	15
Zn	ICP-ES	nd	48
La	ICP-MS	50.27	36
Ce	ICP-MS	87.28	63
Pr	ICP-MS	8.41	6.3
Nd	ICP-MS	27.09	21
Sm	ICP-MS	3.18	2.5
Eu	ICP-MS	0.69	0.51

Appendix E Kimberlite whole rock and trace element data

Sample	Method	KIA93-RL	BCW94-RL
Gd	ICP-MS	1.55	1.6
Tb	ICP-MS	0.15	0.2
Dy	ICP-MS	0.87	0.78
Ho	ICP-MS	0.12	0.15
Er	ICP-MS	0.31	0.32
Tm	ICP-MS	0.04	0.05
Yb	ICP-MS	0.22	0.30
Lu	ICP-MS	0.04	0.06
Y	ICP-MS	3.18	4.70
Ga	ICP-MS	nd	5.40
Mo	ICP-MS	0.90	1.70
Cs	ICP-MS	1.00	1
Tl	ICP-MS	0.13	0.16
Bi	ICP-MS	0.03	0.7
Clement's (1982) Contamination Index		1.50	1.48

Appendix F ICP-AES data for the <0.002 mm fraction of GSC till samples

Table F.1 Elements determined and lower detection limits

Appendix F.1 Aqua regia/ICP-AES data for the <0.002 mm fraction till

Appendix F.2 Quality control data for ICP-AES analysis

Table F.1 Elements determined and lower detection limits for aqua regia/ICP-ES analysis of the <0.002 mm fraction

ELEMENT	LOWER DETECTION LIMIT
Ag	0.2 ppm
Al	0.01%
As	2 ppm
Ba	10 ppm
Be	0.5 ppm
Bi	2 ppm
Ca	0.01%
Cd	0.5 ppm
Co	1 ppm
Cr	1 ppm
Cu	1 ppm
Fe	0.01%
Ga	10 ppm
Hg	1 ppm
K	0.01%
La	10 ppm
Mg	0.01%
Mn	5 ppm
Mo	1 ppm
Na	0.01%
Ni	1 ppm
Pb	2 ppm
Sb	2 ppm
Sc	1 ppm
Sr	1 ppm
Ti	0.01%
V	1 ppm
Zn	2 ppm

Appendix F.1 ICP-ES data for the <0.002 mm fraction of till

Sample	Al	As	Ba	Be	Ca	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sc	Sr	Ti	V	Zn
Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	2	10	0.5	0.01	1	1	1	0.01	10	0.01	10	0.01	5	1	0.01	1	10	2	1	1	0.01	1	2
94BCW3100	5.75	28	200	1.5	0.19	55	157	146	7.25	20	0.91	20	1.93	555	4	0.81	98	4790	22	12	16	0.26	163	170
94BCW3101	4.71	12	160	1.5	0.24	21	152	112	4.82	10	0.74	30	1.57	335	2	0.89	77	4650	16	9	16	0.23	145	118
94BCW3102	4.42	26	100	1	0.14	18	106	58	6.03	10	0.42	20	1.13	305	2	0.94	46	5230	12	7	13	0.14	123	72
94BCW3103	3.85	22	160	1	0.25	27	123	104	5.41	10	0.76	20	1.64	480	2	1.27	71	9020	16	8	17	0.09	113	114
94BCW3104	4.48	30	110	1	0.19	26	93	79	4.77	10	0.40	30	0.93	420	3	1.79	45	10000	16	6	16	0.11	88	64
94BCW3105	4.81	22	150	1.5	0.26	34	116	151	5.59	10	0.74	30	1.67	555	4	1.39	78	8630	14	8	17	0.10	96	110
94BCW3106	4.40	16	180	1	0.24	31	120	94	5.32	10	0.87	10	1.71	525	3	0.97	71	5590	12	8	15	0.13	100	128
94BCW3107	4.44	22	140	1	0.24	25	103	81	5.16	10	0.55	20	1.31	440	2	1.21	57	7570	14	7	16	0.15	95	90
94BCW3108	4.83	16	210	1	0.30	32	144	103	6.22	10	1.32	20	2.18	660	3	0.53	72	2420	16	11	19	0.26	117	140
94BCW3109	4.90	16	160	1.5	0.20	24	131	113	5.99	10	0.85	20	1.63	470	7	0.80	73	3900	18	9	15	0.24	126	126
94BCW3110	4.16	8	170	1	0.32	25	118	85	5.20	20	0.92	20	1.76	495	2	0.76	63	3850	12	9	19	0.12	101	116
94BCW3111	5.14	16	160	1	0.29	30	118	85	5.82	10	0.83	20	1.59	555	3	1.01	60	5660	16	8	20	0.11	106	102
94BCW3112	4.57	32	110	1.5	0.15	31	99	131	5.01	<10	0.49	20	1.05	545	3	1.24	53	6040	16	7	12	0.14	82	94
94BCW3113	4.10	16	150	1	0.20	28	100	81	4.51	10	0.72	10	1.35	435	2	1.14	61	6500	14	7	13	0.13	86	110
94BCW3114	4.79	18	140	1.5	0.28	25	99	96	4.94	10	0.70	20	1.35	480	2	0.82	56	5010	14	8	17	0.19	91	96
94BCW3115	4.69	22	130	1	0.21	24	104	80	5.44	10	0.54	20	1.28	360	3	1.01	53	5880	12	7	16	0.14	99	78
94BCW3116	4.41	10	160	1	0.24	23	125	53	5.73	10	0.64	10	1.65	470	3	0.70	62	3380	14	8	15	0.22	112	110
94BCW3117	5.10	10	200	1	0.23	23	155	39	5.78	20	0.76	10	1.86	400	1	0.43	71	2250	12	10	16	0.23	126	134
94BCW3118	4.87	4	140	2	0.18	31	114	81	4.51	<10	0.63	20	1.27	435	3	1.33	66	10000	16	9	12	0.06	84	94
94BCW3119	4.20	4	90	2	0.12	18	91	89	4.84	<10	0.35	20	0.86	255	4	0.91	51	5630	20	7	9	0.17	89	84
94BCW3120	4.65	16	180	1.5	0.23	38	128	88	5.16	<10	0.89	30	1.65	685	4	0.82	77	6540	18	11	14	0.15	100	126
94BCW3121	3.70	6	90	1	0.15	11	96	54	4.34	<10	0.28	20	0.76	180	1	0.94	30	6440	4	7	11	0.12	72	50
94BCW3122	4.30	6	180	1.5	0.31	29	125	131	4.91	<10	0.80	40	1.63	470	2	0.53	71	3470	12	11	17	0.21	99	108
94BCW3123	3.52	2	80	0.5	0.12	9	87	112	4.49	<10	0.23	20	0.81	185	3	0.85	25	4850	18	6	11	0.14	85	56
94BCW3124	4.20	10	160	1.5	0.22	22	132	108	5.47	<10	0.77	30	1.54	390	2	0.52	58	2680	12	13	16	0.20	115	110
94BCW3125	3.97	<2	160	1.5	0.25	35	125	89	4.71	<10	0.77	30	1.45	470	2	0.78	69	6030	16	10	16	0.09	94	100
94BCW3126	4.14	4	170	1	0.27	24	119	88	4.72	<10	0.90	30	1.62	425	1	0.74	61	5130	14	11	15	0.13	94	116
94BCW3127	5.05	10	240	1.5	0.24	29	169	146	6.40	<10	1.33	20	2.30	580	3	0.40	87	1980	22	15	15	0.26	131	164
94BCW3128	4.34	4	170	2	0.18	23	153	217	4.43	<10	0.88	30	1.67	330	1	0.71	92	3680	26	15	14	0.21	107	168
94BCW3129	3.79	4	160	1.5	0.31	30	104	97	4.22	<10	0.74	40	1.44	530	2	1.29	62	10000	16	9	17	0.07	84	100
94BCW3130	3.23	2	160	1	0.41	26	105	71	4.14	<10	0.79	40	1.56	495	1	0.68	57	6210	14	10	22	0.09	81	102
94BCW3131	5.06	4	100	2	0.16	26	98	105	5.16	<10	0.40	20	1.02	360	3	0.76	46	5470	20	9	10	0.18	96	80
94BCW3132	4.19	8	170	1	0.23	27	131	59	5.28	<10	0.66	30	1.61	490	2	0.65	58	4730	8	11	17	0.13	106	96
94BCW3133	4.61	20	170	1	0.24	36	126	85	4.77	<10	0.69	30	1.41	675	3	1.24	76	10000	30	10	15	0.08	85	92
94BCW3134	4.51	4	120	1	0.17	19	115	78	5.40	<10	0.48	30	1.28	300	2	0.82	48	5190	20	8	13	0.13	114	90
94BCW3135	4.33	12	200	2	0.25	22	148	89	5.31	<10	0.87	30	1.77	395	2	0.76	61	5130	20	11	17	0.16	117	126
94BCW3136	3.64	6	130	1	0.22	18	105	59	4.67	<10	0.52	30	1.26	340	2	0.93	45	5910	20	8	15	0.09	100	86
94BCW3137	3.87	12	200	1	0.30	27	144	77	5.10	<10	1.07	40	1.94	505	2	0.57	64	3240	16	13	18	0.18	111	122
94BCW3138	3.72	4	180	1	0.32	25	135	89	5.15	<10	1.01	40	1.94	495	2	0.69	65	4090	18	13	21	0.11	105	122
94BCW3139	4.40	10	180	1	0.23	22	144	92	5.53	<10	0.85	30	1.70	375	4	0.64	59	3410	24	12	16	0.21	120	110
94BCW3140	3.89	6	170	1.5	0.26	24	125	104	4.99	<10	1.00	30	1.75	435	3	0.35	62	2120	22	12	15	0.24	104	122
94BCW3141	4.42	8	290	1	0.29	27	168	85	5.63	<10	1.29	30	2.21	585	2	0.35	74	1660	18	14	20	0.23	120	140
94BCW3142	4.36	6	210	0.5	0.26	25	158	64	5.43	<10	1.00	20	2.07	470	1	0.39	64	2000	22	12	17	0.23	120	132

Appendix F.1 ICP-ES data for the <0.002 mm fraction of till

Sample	Al	As	Ba	Be	Ca	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sc	Sr	Ti	V	Zn
Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	2	10	0.5	0.01	1	1	1	0.01	10	0.01	10	0.01	5	1	0.01	1	10	2	1	1	0.01	1	2
94BCW3143	4.15	6	200	1.5	0.27	28	138	103	5.21	<10	1.11	30	1.95	525	3	0.38	72	2290	26	12	14	0.25	107	168
94BCW3144	3.45	2	170	1	0.29	28	131	71	4.89	<10	1.04	40	1.87	505	2	0.55	66	3920	24	11	20	0.14	100	136
94BCW3145	5.98	4	110	1.5	0.11	20	123	91	6.52	<10	0.40	40	1.07	240	6	0.86	63	6250	40	9	11	0.23	117	88
94BCW3146	4.71	8	240	0.5	0.19	30	171	60	5.97	<10	1.05	20	2.07	585	1	0.41	76	2050	30	13	18	0.23	132	134
94BCW3147	4.86	<2	130	2.5	0.14	22	104	128	4.84	<10	0.65	30	1.14	340	4	0.72	56	4680	26	9	11	0.20	87	114
94BCW3148	4.55	<2	180	0.5	0.16	23	148	62	5.66	<10	0.87	20	1.92	440	2	0.38	64	1860	22	11	14	0.24	119	110
94BCW3149	4.42	<2	160	1	0.26	23	119	76	4.78	<10	0.72	30	1.51	410	3	0.46	71	3360	20	10	15	0.21	96	122
94BCW3150	4.57	2	190	1	0.22	29	149	74	5.51	<10	0.86	30	1.90	530	4	0.46	75	3040	22	12	17	0.23	122	150
94BCW3151	4.45	4	170	1	0.19	23	137	77	5.16	<10	0.68	20	1.66	380	2	0.38	63	2010	26	10	14	0.21	111	112
94BCW3152	4.04	22	160	1	0.34	31	111	97	4.43	<10	0.86	30	1.61	470	1	0.63	68	4780	22	10	19	0.14	87	112
94BCW3153	5.00	14	170	1	0.20	20	164	112	4.86	<10	0.83	30	1.81	320	1	0.63	76	3300	22	15	16	0.23	148	158
94BCW3155	3.66	20	110	1	0.19	19	82	68	4.05	<10	0.52	30	1.03	350	2	0.94	52	6090	12	7	13	0.12	75	88
94BCW3156	3.73	20	130	1	0.21	22	93	106	4.34	<10	0.62	30	1.28	430	3	1.20	61	9720	14	8	14	0.10	81	104
94BCW3157	5.34	24	170	1.5	0.18	24	124	164	5.77	<10	0.82	40	1.66	435	4	0.66	83	5150	14	12	15	0.19	121	164
94BCW3158	3.92	16	120	1	0.19	13	105	80	5.55	<10	0.55	30	1.24	320	3	0.82	55	6090	12	8	13	0.15	102	96
94BCW3159	3.54	18	110	1	0.13	13	109	102	5.12	10	0.43	30	0.97	230	3	0.88	45	7560	12	8	11	0.13	119	90
94BCW3160	4.30	16	90	0.5	0.11	10	83	56	4.31	10	0.28	30	0.76	245	3	0.92	31	7340	8	7	10	0.12	82	56
94BCW3161	4.59	22	140	1.5	0.16	19	103	107	4.93	10	0.70	30	1.38	440	4	0.70	60	4100	14	9	13	0.16	93	130
94BCW3162	3.87	14	140	1	0.21	26	101	77	4.97	10	0.68	30	1.34	605	4	0.92	56	6950	12	9	13	0.09	102	136
94BCW3163	3.47	6	160	1	0.32	26	101	74	4.35	10	0.78	40	1.54	485	3	1.30	67	10000	12	9	20	0.03	90	112
94BCW3164	3.20	4	120	1	0.24	12	89	69	3.97	10	0.53	30	1.14	285	2	0.74	46	5640	8	8	14	0.10	86	90
94BCW3165	4.28	14	150	1	0.22	19	113	106	5.28	10	0.76	30	1.48	400	6	1.04	61	7810	14	10	16	0.07	116	130
94BCW3166	3.62	12	140	1	0.34	23	98	91	4.59	10	0.74	40	1.45	515	3	0.59	58	4830	12	9	20	0.11	95	128
94BCW3167	2.98	12	100	1	0.20	18	72	86	3.58	10	0.48	30	0.91	365	2	1.21	42	8830	12	6	12	0.09	70	80
94BCW3168	3.88	18	130	1.5	0.22	23	93	117	4.40	10	0.71	30	1.29	450	2	0.76	60	4550	14	9	15	0.16	86	112
94BCW3169	4.33	14	140	1	0.22	18	103	71	5.27	10	0.69	30	1.33	390	3	0.54	51	3210	12	10	16	0.18	106	94
94BCW3170	4.46	26	140	1	0.21	27	103	74	4.90	10	0.52	20	1.27	430	2	0.79	55	4840	12	8	14	0.15	95	96
94BCW3171	6.40	46	170	2	0.11	90	152	174	9.07	20	0.75	20	1.79	635	12	0.58	129	3920	18	13	13	0.21	153	186
94BCW3172	4.11	4	110	0.5	0.15	16	122	66	4.18	10	0.45	20	1.28	255	2	1.35	49	10000	10	8	12	0.10	98	92
94BCW3174	4.85	10	130	1.5	0.16	28	105	84	5.07	10	0.47	20	1.24	335	3	0.83	66	5790	16	8	13	0.13	103	86
94BCW3175	4.43	4	100	1.5	0.11	14	99	82	4.46	10	0.35	10	0.93	255	2	0.91	42	6160	14	7	11	0.14	84	72
94BCW3176	4.15	8	170	1	0.21	28	132	119	5.53	10	0.87	20	1.69	485	4	0.63	72	4060	18	11	14	0.20	126	144
94BCW3177	4.66	8	150	1	0.17	18	105	55	4.49	10	0.51	20	1.21	340	2	0.69	46	4400	8	7	11	0.14	92	84
94BCW3178	4.62	14	150	1	0.17	17	123	93	5.37	10	0.56	20	1.50	355	4	0.80	57	5210	14	9	12	0.17	108	110
94BCW3179	3.51	<2	70	1	0.10	6	91	156	2.00	<10	0.21	70	0.51	105	1	1.41	26	9610	4	6	9	0.06	39	38
94BCW3180	4.63	10	100	1	0.13	12	93	47	4.72	10	0.29	20	0.79	250	3	1.37	29	10000	10	6	16	0.12	96	52
94BCW3181	4.23	14	110	1	0.14	16	92	45	4.57	10	0.37	20	0.89	250	4	1.44	34	10000	10	7	14	0.09	91	56
94BCW3182	3.46	10	70	0.5	0.09	8	86	37	4.53	10	0.25	10	0.70	195	3	1.18	26	7150	8	4	10	0.12	97	52
94BCW3183	3.86	16	130	1.5	0.17	21	142	176	5.35	10	0.59	30	1.30	335	5	0.67	57	4550	18	11	14	0.16	132	116
94BCW3184	4.09	10	120	1	0.19	22	90	89	4.03	10	0.44	20	0.96	340	2	1.23	41	8170	12	7	14	0.10	78	70
94BCW3185	3.67	10	110	1	0.15	17	85	54	4.09	10	0.44	10	0.82	360	2	1.84	41	10000	10	6	12	0.06	67	64
94BCW3186	4.49	14	150	1	0.23	29	105	106	4.84	10	0.65	20	1.36	465	3	0.85	65	4240	16	9	15	0.19	89	92
94BCW3187	3.43	14	80	1	0.16	9	94	85	5.28	10	0.34	30	0.85	180	3	0.95	47	5070	12	7	13	0.12	102	78

Appendix F.1 ICP-ES data for the <0.002 mm fraction of till

Sample	Al	As	Ba	Be	Ca	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sc	Sr	Ti	V	Zn
Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	2	10	0.5	0.01	1	1	1	0.01	10	0.01	10	0.01	5	1	0.01	1	10	2	1	1	0.01	1	2
94BCW3188	4.84	6	40	1	0.05	7	84	45	5.30	10	0.15	30	0.43	145	3	1.30	22	7440	14	6	9	0.15	111	32
94BCW3189	4.88	12	100	1	0.11	12	73	41	4.35	10	0.26	10	0.58	230	2	1.14	28	7140	14	5	17	0.17	85	42
94BCW3190	3.92	2	80	1	0.10	10	103	54	5.38	10	0.31	20	0.85	235	4	1.37	28	9460	14	6	13	0.09	132	56
94BCW3191	4.84	8	100	1	0.12	14	105	58	4.59	10	0.41	20	1.15	285	3	0.82	43	6320	12	8	11	0.17	94	76
94BCW3192	4.20	14	130	1	0.17	20	129	86	4.37	10	0.53	20	1.31	260	2	0.99	65	7060	14	9	17	0.13	117	96
94BCW3193	4.07	12	150	1	0.19	36	118	94	4.77	10	0.72	20	1.59	525	3	1.16	87	6600	14	9	14	0.10	98	126
94BCW3194	3.38	2	170	0.5	0.31	22	120	59	4.54	10	0.90	20	1.64	375	1	1.42	62	9930	12	9	17	0.02	90	122
94BCW3195	4.35	8	140	1	0.27	34	94	60	3.87	10	0.66	30	1.23	475	2	1.45	56	10000	14	8	16	0.03	75	98
94BCW3196	3.41	16	110	0.5	0.14	15	92	75	4.15	10	0.43	10	1.02	265	2	1.30	41	7100	10	6	10	0.10	82	72
94BCW3197	2.92	10	130	0.5	0.34	24	90	88	3.80	10	0.67	30	1.29	370	1	1.61	53	10000	14	7	18	0.03	75	92
94BCW3198	3.24	6	110	1	0.23	21	86	89	3.55	10	0.55	20	1.06	365	2	1.34	43	8420	12	7	14	0.06	67	84
94BCW3199	3.43	4	170	0.5	0.34	25	114	79	4.50	10	0.98	30	1.72	485	1	0.70	56	4800	12	10	20	0.10	95	118
94BCW3200	4.37	<2	170	1	0.23	54	152	116	4.39	10	0.91	20	1.93	395	1	1.13	123	6930	12	10	15	0.10	92	156
94BCW3201	3.69	10	160	1	0.27	28	108	93	4.38	10	0.95	20	1.63	465	2	0.72	66	3970	12	9	16	0.15	87	126
94BCW3202	3.19	6	110	1.5	0.16	12	123	173	2.28	10	0.53	30	1.04	215	3	1.39	51	7930	12	9	12	0.04	83	84
94BCW3203	3.47	8	110	1	0.23	23	80	68	3.52	10	0.48	20	1.01	360	2	0.71	46	3840	14	7	14	0.15	73	78
94BCW3204	3.75	8	170	1	0.26	29	104	53	4.18	10	0.86	20	1.59	465	2	0.44	55	2950	12	9	14	0.21	87	110
94BCW3205	3.66	2	200	1	0.34	21	133	82	5.20	10	1.50	40	2.29	530	1	0.41	83	1750	16	13	20	0.28	111	152
94BCW3206	4.34	18	130	1	0.19	19	118	72	5.46	10	0.57	20	1.42	370	3	0.52	57	2470	12	11	15	0.24	125	86
94BCW3207	4.20	22	120	1	0.15	21	113	95	5.70	10	0.43	20	1.12	345	5	0.69	57	3770	14	9	15	0.21	121	84
94BCW3208	4.39	18	200	1	0.32	29	120	105	5.20	10	0.94	20	1.86	495	3	0.39	68	2540	14	11	20	0.22	108	122
94BCW3209	4.36	14	190	1	0.28	29	117	101	5.15	10	0.92	20	1.80	485	3	0.50	70	3020	16	10	19	0.22	105	116

Appendix F.2 Analytical quality control data for ICP-ES analysis of the <0.063 mm fraction

Sample	Element	Al	As	Ba	Be	Ca	Co	Cr	Cu	Fe	Ga	K%	La	Mg	Mn	Mo	Na	Ni	Pb	Sc	Sr	Tl	V	Zn
	Units	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm		ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
	Detection Limit	0.01	2	10	0.5	0.01	1	1	1	0.01	10	0.01	10	0.01	5	1	0.01	1	2	1	1	0.01	1	2
Duplicates																								
94BCW2758	Original	4.46	20	210	0.5	0.34	29	149	115	5.71	10	1.00	20	2.14	560	2	0.52	76	10	12	20	0.24	125	138
94BCW2758	Duplicate	3.70	22	160	0.5	0.28	24	115	95	4.99	10	0.95	20	1.81	495	2	0.48	67	10	11	17	0.22	102	112
94BCW2773	Original	4.68	6	240	1.0	0.29	28	159	69	5.76	10	1.16	20	2.23	600	2	0.50	81	12	12	18	0.24	126	142
94BCW2773	Duplicate	4.07	8	200	1.0	0.26	24	139	66	5.07	20	1.10	20	1.89	530	1	0.47	75	10	12	16	0.22	112	128
94BCW2788	Original	5.21	32	260	1.0	0.26	30	158	161	6.70	20	1.12	20	2.35	585	3	0.47	91	14	12	18	0.23	138	170
94BCW2788	Duplicate	4.53	32	230	1.0	0.22	26	140	147	5.89	20	1.08	20	2.01	515	2	0.44	82	14	13	17	0.20	119	148
94BCW2805	Original	5.08	26	210	1.0	0.25	29	141	85	6.29	10	0.89	20	2.09	550	2	0.48	69	14	11	18	0.21	130	130
94BCW2805	Duplicate	4.58	26	190	1.0	0.24	26	142	86	5.87	20	0.91	20	1.93	515	2	0.44	66	14	12	18	0.20	127	128
94BCW2820	Original	4.87	60	250	1.0	0.32	33	152	150	6.31	10	1.39	20	2.33	630	4	0.62	96	20	13	17	0.28	130	146
94BCW2820	Duplicate	4.25	42	230	1.0	0.30	29	145	146	5.59	10	1.34	20	2.06	565	4	0.55	86	12	14	18	0.21	119	140
94BCW2834	Original	5.11	30	280	0.5	0.33	28	148	153	6.31	10	1.21	20	2.21	560	2	0.67	89	10	11	21	0.23	126	136
94BCW2834	Duplicate	4.36	26	230	0.5	0.29	23	122	133	5.33	10	1.14	20	1.92	480	2	0.57	82	10	12	20	0.21	104	120
94BCW2848	Original	5.23	88	200	1.0	0.25	41	156	151	6.96	10	0.79	20	2.16	655	4	0.76	96	16	10	16	0.21	138	126
94BCW2848	Duplicate	5.06	102	210	1.0	0.24	42	171	168	6.71	20	0.78	20	2.07	630	4	0.72	103	12	13	17	0.19	140	138
94BCW2879	Original	4.23	12	160	1.0	0.41	27	106	74	4.52	10	0.69	30	1.50	490	1	0.63	55	14	8	27	0.18	90	94
94BCW2879	Duplicate	3.66	18	130	0.5	0.29	26	98	70	4.17	10	0.58	20	1.36	450	1	0.54	57	12	7	16	0.15	79	88
94BCW3108	Original	4.83	16	210	1.0	0.30	32	144	103	6.22	10	1.32	20	2.18	660	3	0.53	72	16	11	19	0.26	117	140
94BCW3108	Duplicate	4.37	14	210	1.0	0.27	31	141	105	5.71	10	1.24	20	2.12	610	3	0.50	74	14	12	17	0.27	117	150
94BCW3124	Original	4.20	10	160	1.5	0.22	22	132	108	5.47	<10	0.77	30	1.54	390	2	0.52	58	12	13	16	0.20	115	110
94BCW3124	Duplicate	4.29	18	150	1.0	0.19	22	121	107	5.28	10	0.69	20	1.50	380	2	0.57	62	14	10	14	0.19	111	110
94BCW3140	Original	3.89	6	170	1.5	0.26	24	125	104	4.99	<10	1.00	30	1.75	435	3	0.35	62	22	12	15	0.24	104	122
94BCW3140	Duplicate	4.17	12	180	1.0	0.24	26	127	109	5.18	10	0.92	20	1.77	460	2	0.34	72	16	10	14	0.24	107	128
94BCW3160	Original	4.30	16	90	0.5	0.11	10	83	56	4.31	10	0.28	30	0.76	245	3	0.92	31	8	7	10	0.12	82	56
94BCW3160	Duplicate	4.84	18	90	0.5	0.10	14	98	65	4.62	10	0.27	20	0.79	255	3	0.94	32	8	6	10	0.13	88	56
94BCW3189	Original	4.88	12	100	1.0	0.11	12	73	41	4.35	10	0.26	10	0.58	230	2	1.14	28	14	5	17	0.17	85	42
94BCW3189	Duplicate	4.90	10	100	1.0	0.10	13	74	39	4.27	10	0.24	10	0.57	230	2	1.14	28	16	4	15	0.17	83	44
94BCW3204	Original	3.75	8	170	1.0	0.26	29	104	53	4.18	10	0.86	20	1.59	465	2	0.44	55	12	9	14	0.21	87	110
94BCW3204	Duplicate	4.20	12	200	1.0	0.28	34	117	55	4.33	10	0.85	20	1.70	485	1	0.46	63	14	9	15	0.20	91	124
Standards																								
TCA8010	Standard	0.89	4	30	<0.5	0.42	6	25	29	1.57	<10	0.05	10	0.40	220	<1	0.01	15	4	4	22	0.08	30	22
TCA8010	Standard	1.01	6	30	<0.5	0.46	7	28	35	1.76	<10	0.06	10	0.45	250	<1	0.01	17	4	5	23	0.09	32	40
TCA8010	Standard	0.89	6	30	<0.5	0.39	7	25	32	1.59	<10	0.04	10	0.42	230	<1	<0.01	16	4	4	19	0.07	27	24
Previously analysed standard TCA8010																								
(N=19)	Mean	1.02	4.8	34	0.8	0.46	8.4	29	38	1.82	10	0.06	20	0.45	269	1	0.01	18	4.5	6.3	23	0.09	32	30

Appendix G INAA data for the <0.063 mm fraction of GSC till samples

Table G.1 Elements determined and lower detection limits

Appendix G.1 INAA geochemical data for <0.063 mm fraction of till

Appendix G.2 Quality control data for INAA analysis

Table G.1 Elements determined and lower detection limits for INAA analysis of the <0.063 mm fraction

ELEMENT	LOWER DETECTION LIMIT
Ag	5 ppm
As	0.5 ppm
Au	2 ppb
Ba	50 ppm
Br	0.5 ppm
Ca	1%
Ce	3 ppm
Co	1 ppm
Cr	5 ppm
Cs	1 ppm
Eu	0.2 ppm
Fe	0.01%
Hf	1 ppm
Hg	1 ppm
Ir	5 ppm
La	0.5 ppm
Lu	0.05 ppm
Mo	1 ppm
Na	0.01%
Nd	5 ppm
Ni	20 ppm
Rb	5 ppm
Sb	0.1 ppm
Sc	0.1 ppm
Se	5 ppm
Sm	0.1 ppm
Sn	100 ppm
Sr	500 ppm
Ta	0.5 ppm
Tb	0.5 ppm
Th	0.2 ppm
U	0.5 ppm
W	1 ppm
Yb	0.2 ppm
Zn	50 ppm

Appendix G.1 INAA data for the <0.063 mm fraction of GSC till samples

Element	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Na	Rb	Sc	Ta	Th	U	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Units	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	2	0.5	50	0.5	1	1	5	1	0.01	1	0.01	5	0.1	0.5	0.2	0.5	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05	0.00
94 BCW 3100	3	2.9	550	2.0	2	10	64	2	2.03	8	1.88	57	8.4	1.0	12	3.8	85	35	69	26	4.8	1.2	0.7	2.0	0.34	31.84
94 BCW 3101	2	2.2	570	<0.5	<1	6	55	2	1.78	7	1.94	57	7.9	<0.5	11	3.1	<50	36	67	25	4.8	1.1	<0.5	1.8	0.30	30.68
94 BCW 3102	<2	3.7	560	4.7	1	7	66	3	2.19	8	2.04	44	8.7	<0.5	10	2.5	51	37	68	30	4.8	1.2	0.7	2.2	0.31	30.79
94 BCW 3103	5	3.4	560	2.3	<1	8	71	3	2.20	7	2.04	65	8.7	1.0	11	2.8	82	36	69	28	4.8	1.2	0.6	2.0	0.29	30.31
94 BCW 3104	<2	2.5	550	2.4	1	7	58	2	1.86	7	1.99	57	7.5	1.0	9.9	2.9	59	32	61	25	4.4	1.1	<0.5	2.0	0.29	34.15
94 BCW 3105	3	3.4	480	2.3	1	7	62	2	2.00	8	1.95	61	7.9	<0.5	11	3.3	<50	36	67	26	4.6	1.1	0.6	1.8	0.28	29.54
94 BCW 3106	<2	2.6	520	2.2	2	6	51	2	1.77	6	1.99	67	7.1	<0.5	9.4	2.1	<50	29	54	22	4.0	1.0	0.6	1.6	0.25	34.55
94 BCW 3107	24	3.2	560	3.3	<1	7	58	2	1.93	7	1.83	53	7.7	0.9	9.8	2.3	<50	32	59	22	4.3	1.0	<0.5	1.8	0.28	33.76
94 BCW 3108	9	2.9	590	2.0	<1	7	60	3	1.96	7	1.84	71	7.7	1.2	9.5	3.0	<50	30	56	22	4.0	1.0	0.5	1.7	0.25	31.93
94 BCW 3109	4	2.3	560	4.8	1	7	65	3	2.11	7	1.94	76	8.4	0.8	12	3.7	60	35	67	26	4.8	1.1	0.6	2.0	0.30	27.74
94 BCW 3110	4	2.3	570	2.4	1	6	53	2	1.81	8	1.93	54	7.4	<0.5	11	3.1	<50	37	68	25	4.8	1.1	0.6	2.0	0.30	34.80
94 BCW 3111	8	2.4	530	2.7	1	7	49	2	1.74	7	1.80	55	7.0	<0.5	8.8	2.5	<50	31	59	23	4.2	1.0	0.6	1.8	0.28	34.44
94 BCW 3112	5	3.9	550	3.4	1	7	49	2	1.74	7	1.74	53	6.8	<0.5	8.2	2.7	<50	29	53	21	3.8	0.9	0.5	1.6	0.25	36.27
94 BCW 3113	<2	2.3	530	3.5	2	6	49	2	1.61	6	2.03	59	6.9	<0.5	8.8	2.1	<50	28	53	19	3.9	1.0	<0.5	1.7	0.24	33.94
94 BCW 3114	<2	3.0	540	2.1	1	6	52	2	1.76	7	1.93	60	7.1	<0.5	11	3.1	51	35	64	28	4.6	1.1	0.6	1.8	0.29	33.27
94 BCW 3115	<2	2.8	580	3.1	1	6	53	2	1.81	8	1.88	61	7.4	1.0	10	2.4	<50	34	65	23	4.6	1.1	0.6	1.9	0.30	32.83
94 BCW 3116	5	2.1	500	3.3	<1	6	60	2	1.91	7	1.90	76	7.7	<0.5	11	2.4	83	33	63	24	4.5	1.1	0.6	1.9	0.27	30.15
94 BCW 3117	5	3.1	630	2.4	1	7	68	3	2.11	8	1.86	72	8.7	<0.5	13	3.1	61	36	71	29	5.0	1.1	0.6	2.0	0.31	28.44
94 BCW 3118	6	0.9	510	3.0	<1	6	44	1	1.45	8	1.89	49	6.0	<0.5	15	3.2	72	40	74	33	5.3	1.0	0.6	1.9	0.30	37.41
94 BCW 3119	3	1.9	460	5.0	2	5	45	2	1.56	7	1.80	48	6.0	0.9	12	2.8	66	33	64	26	4.4	1.0	<0.5	1.6	0.26	33.29
94 BCW 3120	7	3.4	550	3.4	<1	7	50	2	1.73	8	1.83	66	6.7	1.2	12	3.3	55	37	69	32	5.0	1.1	0.6	1.9	0.30	34.58
94 BCW 3121	<2	2.4	530	5.3	1	6	52	2	1.80	7	1.80	35	7.2	1.1	10	2.0	<50	33	61	27	4.5	1.1	0.7	1.8	0.26	32.11
94 BCW 3122	5	2.4	570	3.5	<1	6	50	1	1.62	7	1.85	52	6.5	<0.5	11	2.5	<50	34	65	27	4.5	1.0	0.6	1.9	0.29	30.70
94 BCW 3123	6	2.4	400	7.2	<1	4	46	2	1.62	8	1.59	52	6.4	<0.5	9.8	3.2	<50	31	59	24	4.2	1.0	0.7	1.7	0.26	28.67
94 BCW 3124	<2	2.6	460	2.4	<1	5	43	1	1.46	5	1.49	43	6.0	<0.5	7	2.6	<50	25	47	21	3.3	0.9	<0.5	1.4	0.18	38.84
94 BCW 3125	5	1.8	560	1.7	<1	6	37	1	1.32	8	1.98	42	5.4	<0.5	16	3.6	<50	40	74	29	5.2	1.1	0.7	1.8	0.30	36.83
94 BCW 3126	<2	1.9	540	2.3	1	6	48	2	1.58	8	1.96	57	6.3	<0.5	17	2.6	<50	41	76	29	5.3	1.0	0.7	1.9	0.28	36.55
94 BCW 3127	7	6.5	670	3.2	2	11	85	4	2.80	9	1.90	68	10.0	<0.5	15	5.4	57	44	83	36	5.6	1.3	1.0	1.9	0.32	26.03
94 BCW 3128	<2	3.3	600	<0.5	2	8	66	3	1.91	9	1.96	71	8.9	<0.5	17	6.0	91	49	93	39	6.5	1.4	<0.5	2.1	0.36	27.06
94 BCW 3129	6	3.2	680	2.5	<1	8	60	2	2.03	8	2.02	80	7.8	1.2	16	3.7	<50	42	81	30	5.5	1.2	0.8	1.9	0.32	33.31
94 BCW 3130	<2	2.9	610	1.7	<1	7	56	2	1.93	7	1.98	39	7.6	0.9	11	2.9	<50	36	70	30	4.9	1.1	<0.5	2.0	0.32	30.70
94 BCW 3131	11	1.9	600	6.4	1	8	47	2	1.87	8	1.93	65	7.1	<0.5	13	3.0	<50	37	71	29	5.0	1.1	<0.5	1.8	0.28	32.89
94 BCW 3132	6	2.3	520	<0.5	2	7	54	2	1.81	7	1.99	61	7.4	0.9	8.4	2.4	<50	29	57	21	3.9	1.0	<0.5	1.8	0.25	35.48
94 BCW 3133	5	3.6	600	3.3	<1	7	48	2	1.71	10	1.80	64	6.8	<0.5	17	4.0	51	46	87	32	5.9	1.2	0.8	2.4	0.34	37.10
94 BCW 3134	<2	3.0	660	3.9	<1	6	54	2	1.88	8	1.88	72	7.1	<0.5	13	3.5	<50	37	70	32	4.9	1.1	0.7	1.8	0.30	31.85
94 BCW 3135	15	3.6	560	3.2	1	9	71	3	2.33	8	1.96	71	9.2	<0.5	12	3.7	59	39	79	31	5.1	1.1	0.7	2.1	0.32	28.30
94 BCW 3136	<2	2.6	520	3.0	<1	7	57	2	2.02	8	1.90	57	8.0	1.0	9.8	2.7	<50	32	63	21	4.5	1.1	0.6	2.0	0.30	33.77
94 BCW 3137	14	1.9	490	1.7	1	7	63	2	1.92	9	1.99	57	8.3	0.9	13	4.1	55	42	79	33	5.5	1.3	<0.5	2.3	0.36	31.02
94 BCW 3138	<2	1.8	480	1.6	2	6	59	2	1.84	8	1.96	44	7.9	<0.5	10	3.3	71	34	67	27	4.6	1.2	<0.5	2.0	0.31	34.16
94 BCW 3139	<2	3.2	610	2.3	1	7	60	2	2.06	9	1.96	41	8.4	<0.5	11	3.1	70	36	69	30	4.9	1.3	<0.5	2.0	0.31	29.91
94 BCW 3140	6	2.0	770	3.2	2	8	68	2	2.15	8	1.99	74	8.3	<0.5	15	3.1	<50	42	80	29	5.4	1.2	0.7	1.9	0.31	30.18

Appendix G.1 INAA data for the <0.063 mm fraction of GSC till samples

Element	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Na	Rb	Sc	Ta	Th	U	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Units	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	2	0.5	50	0.5	1	1	5	1	0.01	1	0.01	5	0.1	0.5	0.2	0.5	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05	0.00
94 BCW 3141	5	6.0	740	2.7	2	12	100	5	3.07	7	1.75	99	12.0	<0.5	12	3.6	87	37	73	33	5.0	1.1	0.6	1.9	0.32	21.10
94 BCW 3142	<2	2.7	550	2.7	<1	8	68	2	2.11	8	1.86	61	8.5	<0.5	9.3	2.3	51	32	60	26	4.3	1.1	0.7	2.0	0.29	31.67
94 BCW 3143	6	2.3	620	4.0	1	7	64	2	2.10	9	2.03	79	8.0	<0.5	20	3.9	75	51	97	35	6.5	1.3	0.8	2.0	0.34	31.15
94 BCW 3144	<2	1.8	600	<0.5	<1	5	49	2	1.64	10	1.95	56	7.2	<0.5	17	3.6	<50	46	84	32	6.2	1.2	0.8	2.4	0.38	33.38
94 BCW 3145	4	1.5	560	6.1	1	6	57	2	1.83	8	1.86	73	6.4	<0.5	16	3.6	80	40	77	29	5.1	1.1	0.7	1.7	0.26	29.66
94 BCW 3146	4	2.6	670	2.1	<1	9	75	3	2.14	8	1.94	83	8.9	<0.5	12	3.7	54	35	68	28	4.7	1.1	<0.5	2.0	0.30	29.39
94 BCW 3147	<2	2.3	680	6.0	1	6	49	2	1.88	9	2.00	61	6.5	<0.5	18	3.9	<50	44	80	34	5.6	1.1	<0.5	2.0	0.28	31.49
94 BCW 3148	<2	2.9	580	3.9	1	9	79	3	2.42	8	1.95	92	8.9	<0.5	13	3.5	<50	35	69	27	4.5	1.0	<0.5	1.7	0.28	27.36
94 BCW 3149	<2	2.5	680	4.7	1	9	66	2	2.22	8	2.07	89	7.8	<0.5	16	2.9	76	40	79	29	5.2	1.2	0.8	1.8	0.29	31.92
94 BCW 3150	3	2.0	580	2.3	2	8	65	3	1.94	9	2.07	66	8.4	1.1	15	2.8	56	42	79	30	5.5	1.2	<0.5	2.0	0.34	33.29
94 BCW 3151	<2	2.2	600	3.8	<1	7	61	2	1.89	6	2.05	75	7.6	<0.5	11	2.8	69	31	57	23	3.9	1.0	<0.5	1.6	0.22	31.69
94 BCW 3152	3	2.4	550	1.9	<1	7	53	2	1.76	8	1.94	56	7.2	0.8	13	3.0	66	38	73	30	5.1	1.2	0.7	2.2	0.30	34.97
94 BCW 3153	17	<0.5	550	1.8	2	6	63	2	1.88	8	2.04	60	8.6	<0.5	13	3.4	64	40	79	31	5.4	1.3	0.8	2.2	0.35	30.25
94 BCW 3155	10	3.6	550	4.3	1	7	56	2	1.99	8	1.98	60	7.9	<0.5	12	3.0	<50	35	66	29	4.8	1.2	0.6	1.9	0.28	34.62
94 BCW 3156	14	3.1	520	2.1	2	6	55	2	1.83	8	1.94	61	7.3	0.8	11	3.4	73	35	65	25	4.6	1.1	<0.5	1.8	0.28	33.66
94 BCW 3157	6	3.0	590	3.3	<1	6	57	2	1.82	7	1.88	47	7.5	0.8	11	3.7	54	35	65	28	4.6	1.2	0.7	1.9	0.28	33.01
94 BCW 3158	9	2.7	560	3.2	<1	7	63	2	2.00	8	2.06	63	8.1	<0.5	11	3.2	<50	36	71	28	4.9	1.2	0.6	2.1	0.34	31.13
94 BCW 3159	<2	3.4	630	3.4	<1	6	62	2	1.95	8	2.03	61	8.3	1.1	11	3.6	<50	36	71	31	4.1	1.3	0.7	2.1	0.32	30.94
94 BCW 3160	13	2.9	630	5.7	2	6	60	2	2.04	9	1.95	62	8.3	1.2	11	2.6	<50	37	72	29	5.0	1.2	0.6	2.2	0.34	30.19
94 BCW 3161	<2	3.4	620	3.7	<1	6	57	2	1.89	7	1.88	61	8.0	<0.5	10	3.1	57	31	59	22	4.2	1.1	0.6	1.9	0.28	33.38
94 BCW 3162	<2	3.2	600	2.5	1	7	57	2	1.83	7	1.93	63	7.8	<0.5	9.3	2.3	58	30	58	23	4.1	1.0	<0.5	1.7	0.27	32.12
94 BCW 3163	6	2.2	540	<0.5	<1	7	58	2	1.80	7	1.93	68	7.4	0.9	10	2.8	<50	32	62	26	4.4	1.1	0.6	1.7	0.28	32.66
94 BCW 3164	7	1.4	500	2.7	2	6	50	2	1.63	8	1.91	52	7.0	<0.5	12	2.9	<50	37	69	28	5.0	1.1	0.6	2.0	0.32	34.40
94 BCW 3165	<2	2.1	660	2.5	<1	5	50	2	1.67	8	1.94	51	7.1	<0.5	11	2.9	64	35	66	25	4.7	1.1	0.6	2.0	0.28	35.49
94 BCW 3166	6	2.8	540	<0.5	1	7	61	2	1.96	8	2.03	65	8.1	<0.5	13	2.9	71	39	76	32	5.3	1.3	0.7	2.2	0.33	30.97
94 BCW 3167	<2	1.8	490	3.9	2	6	50	2	1.73	7	1.90	58	7.0	<0.5	10	2.3	<50	33	64	26	4.5	1.1	<0.5	1.8	0.28	31.84
94 BCW 3168	3	3.3	580	3.2	1	8	59	2	1.90	8	1.89	78	7.4	1.0	12	4.1	67	37	72	30	4.9	1.1	0.6	1.9	0.30	31.03
94 BCW 3169	7	2.4	610	2.1	<1	7	63	2	2.09	8	1.96	58	8.4	1.0	11	2.9	58	37	72	27	5.0	1.2	0.6	2.1	0.32	31.83
94 BCW 3170	<2	3.6	510	3.0	1	8	62	2	2.10	7	1.92	52	8.3	0.9	8.8	2.6	<50	29	55	25	4.0	1.1	0.7	1.9	0.29	31.96
94 BCW 3171	9	11.0	510	3.2	<1	22	81	3	3.32	8	1.69	66	10.0	<0.5	14	6.5	96	39	77	33	5.2	1.3	0.7	2.1	0.31	30.20
94 BCW 3172	4	2.0	580	3.0	2	5	51	2	1.57	9	1.90	65	7.4	<0.5	11	2.9	<50	37	71	28	5.0	1.2	0.6	2.2	0.31	31.80
94 BCW 3174	<2	2.8	550	6.3	2	8	62	3	2.15	9	1.84	75	7.8	<0.5	17	4.1	61	44	87	31	5.7	1.2	0.8	2.1	0.33	28.59
94 BCW 3175	<2	2.1	590	4.7	2	5	50	2	1.73	7	1.73	53	6.8	<0.5	11	3.0	<50	33	62	27	4.4	1.0	<0.5	1.6	0.27	32.67
94 BCW 3176	7	<0.5	590	2.1	2	5	44	1	1.52	7	1.84	57	6.2	<0.5	14	3.6	<50	38	71	28	4.9	1.0	0.6	1.7	0.29	32.30
94 BCW 3177	4	<0.5	490	3.2	1	5	49	2	1.68	7	1.78	58	7.0	0.8	10	2.5	69	32	58	29	4.3	1.0	0.6	1.8	0.29	34.92
94 BCW 3178	6	2.5	560	3.5	1	6	61	2	1.96	9	1.82	67	7.9	<0.5	14	3.5	<50	39	74	33	5.2	1.2	0.6	2.2	0.33	30.66
94 BCW 3179	8	2.0	460	4.2	2	4	40	2	1.29	8	1.80	51	6.5	1.0	12	3.6	57	40	76	30	5.1	1.2	0.7	1.9	0.28	31.47
94 BCW 3180	4	1.5	500	3.3	1	4	42	2	1.40	7	1.77	55	5.7	<0.5	8.9	2.5	<50	28	54	19	3.8	1.0	<0.5	1.6	0.25	33.14
94 BCW 3181	8	1.9	480	3.5	<1	5	45	2	1.52	8	1.85	50	6.4	<0.5	12	2.4	<50	35	67	26	4.7	1.1	0.6	2.0	0.30	35.05
94 BCW 3182	10	2.3	440	5.6	2	4	44	1	1.57	7	1.74	58	6.2	1.1	8.7	2.6	<50	28	52	19	3.7	1.0	0.6	1.6	0.26	32.16
94 BCW 3183	<2	1.7	590	2.2	1	5	43	2	1.49	6	1.79	53	6.4	0.8	9.1	3.1	<50	29	55	21	3.8	1.0	0.6	1.5	0.24	32.94

Appendix G.1 INAA data for the <0.063 mm fraction of GSC till samples

Element	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Na	Rb	Sc	Ta	Th	U	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Units	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	2	0.5	50	0.5	1	1	5	1	0.01	1	0.01	5	0.1	0.5	0.2	0.5	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05	0.00
94 BCW 3184	5	2.0	500	2.9	1	6	53	2	1.71	8	1.90	49	7.2	1.1	11	3.1	65	35	65	28	4.6	1.1	0.6	2.0	0.30	37.55
94 BCW 3185	<2	1.6	520	3.6	2	5	43	1	1.64	9	1.95	47	6.6	<0.5	13	3.1	55	39	71	30	5.2	1.2	0.7	2.0	0.33	35.98
94 BCW 3186	<2	2.5	530	4.4	<1	6	51	2	1.86	11	1.87	53	7.3	1.2	18	3.9	<50	50	95	36	6.6	1.3	0.9	2.4	0.39	35.53
94 BCW 3187	4	2.1	460	3.9	2	5	48	2	1.67	6	1.77	53	6.7	1.0	9.2	2.4	61	31	58	28	4.1	1.0	0.6	1.7	0.25	31.09
94 BCW 3188	<2	1.2	400	6.3	1	4	40	1	1.58	10	1.79	49	6.0	1.2	13	3.5	<50	40	75	29	5.1	1.1	<0.5	2.0	0.31	34.56
94 BCW 3189	<2	2.7	530	6.0	1	5	48	1	1.63	8	1.81	45	6.3	<0.5	11	2.8	<50	32	60	25	4.3	1.0	0.6	1.8	0.28	33.80
94 BCW 3190	5	2.0	580	5.8	<1	5	53	2	1.73	7	1.72	46	6.5	<0.5	10	3.1	51	31	59	26	4.2	0.9	0.6	1.7	0.25	31.03
94 BCW 3191	<2	1.2	500	4.1	<1	5	44	2	1.54	6	1.74	54	6.4	0.8	8.8	2.2	<50	25	49	20	3.4	0.9	0.6	1.5	0.22	33.97
94 BCW 3192	8	1.6	570	2.2	2	6	57	2	1.75	8	1.90	43	7.6	<0.5	11	2.4	77	35	66	26	4.7	1.2	0.5	1.8	0.27	29.65
94 BCW 3193	<2	2.9	560	3.8	<1	8	69	2	1.94	8	1.90	51	7.3	<0.5	13	2.3	<50	36	69	30	4.9	1.1	0.7	2.0	0.27	31.42
94 BCW 3194	<2	<0.5	540	1.4	<1	6	51	2	1.63	8	1.90	54	6.9	<0.5	12	2.8	<50	37	69	27	4.9	1.1	<0.5	2.0	0.31	33.72
94 BCW 3195	5	2.2	560	4.3	2	7	50	2	1.78	9	2.07	51	7.0	<0.5	13	3.2	74	40	75	31	5.5	1.2	<0.5	2.1	0.31	33.41
94 BCW 3196	7	3.2	570	4.6	2	5	54	2	1.84	9	1.97	49	7.4	<0.5	11	3.2	51	37	70	30	5.0	1.2	0.7	2.0	0.33	32.15
94 BCW 3197	5	2.0	480	1.8	2	6	51	2	1.74	8	2.00	57	7.1	0.6	12	3.0	59	37	69	31	5.0	1.2	0.7	2.0	0.29	33.90
94 BCW 3198	<2	1.8	490	2.3	<1	6	46	2	1.66	8	1.89	48	6.6	<0.5	11	3.2	<50	35	67	27	4.8	1.1	0.7	1.9	0.29	35.08
94 BCW 3199	<2	1.8	520	1.5	1	6	52	2	1.70	7	2.03	67	7.1	<0.5	10	2.8	<50	32	63	25	4.4	1.1	0.5	1.8	0.26	32.05
94 BCW 3200	<2	<0.5	540	2.5	<1	9	53	2	1.66	9	2.04	59	7.6	<0.5	13	2.8	66	39	75	30	5.2	1.1	0.7	2.0	0.29	32.19
94 BCW 3201	<2	1.7	570	1.9	1	6	50	2	1.74	8	1.92	53	6.8	<0.5	13	3.2	61	38	70	30	5.1	1.1	0.6	1.9	0.29	33.30
94 BCW 3202	<2	1.6	540	2.3	1	4	43	2	1.14	7	1.96	51	6.0	0.9	9.6	3.2	<50	31	60	24	4.3	1.0	0.6	1.8	0.28	31.98
94 BCW 3203	<2	2.8	540	4.8	<1	7	52	2	1.83	8	1.93	45	7.3	0.9	12	2.6	<50	35	66	26	4.7	1.1	0.7	2.0	0.28	34.14
94 BCW 3204	<2	2.0	540	2.2	1	7	54	2	1.80	8	2.07	66	7.3	<0.5	12	3.1	<50	36	69	25	4.8	1.1	0.7	1.9	0.28	35.29
94 BCW 3205	<2	1.5	710	1.7	2	6	69	2	1.93	9	2.11	86	7.8	1.2	21	5.1	72	54	98	35	6.8	1.3	0.8	2.2	0.34	28.69
94 BCW 3206	<2	1.4	520	2.8	1	6	55	2	1.90	11	2.03	49	8.2	0.9	14	3.4	<50	45	82	30	5.8	1.3	0.8	2.5	0.36	32.27
94 BCW 3207	<2	3.2	560	4.1	1	7	63	2	2.08	7	1.95	69	8.0	0.7	11	2.9	59	33	64	27	4.4	1.1	0.6	1.8	0.29	29.59
94 BCW 3208	10	2.1	540	2.4	1	7	56	2	1.87	9	1.95	53	7.6	<0.5	14	3.3	68	42	77	33	5.2	1.2	0.8	2.2	0.35	34.66
94 BCW 3209	14	2.6	510	2.1	2	6	53	2	1.83	7	1.88	58	7.3	<0.5	11	2.5	65	34	64	24	4.6	1.1	0.5	1.9	0.29	34.07

Appendix G.2 Analytical quality control data for INAA analysis of <0.063 mm fraction

Sample	Element	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Na	Rb	Sc	Ta	Th	U	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
	Units	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
	Detection Limit	2	0.5	50	0.5	1	1	5	1	0.01	1	0.01	5	0.1	0.5	0.2	0.5	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05	0.00
Duplicates																											
94BCW2779	original	<2	3.5	550	2.1	<1	6	44	2	1.59	9	1.84	70	6.6	1.0	20.0	4.3	<50	46	87	35	5.9	1.0	0.9	2.3	0.37	33.08
94BCW2779	duplicate	<2	3.5	580	2.0	2	6	44	1	1.70	9	2.02	79	6.8	<0.5	22.0	3.9	<50	48	91	31	6.0	1.1	0.8	2.5	0.37	34.58
94BCW2790	original	<2	7.8	500	3.0	<1	8	57	2	2.05	6	1.80	55	7.9	1.0	7.2	2.0	<50	25	48	20	3.5	0.9	<0.5	1.5	0.24	32.39
94BCW2790	duplicate	6	7.8	510	3.0	2	8	62	3	2.14	6	1.87	48	8.3	<0.5	8.0	1.8	<50	26	52	18	3.7	1.0	<0.5	1.6	0.28	32.02
94BCW2799	original	3	6.7	510	1.6	1	8	65	2	2.25	7	1.88	56	8.6	<0.5	8.8	2.4	<50	29	55	21	3.9	1.1	<0.5	1.8	0.27	33.44
94BCW2799	duplicate	2	5.9	500	2.0	1	7	55	2	2.01	7	1.76	46	7.7	0.9	7.6	2.5	<50	26	49	20	3.5	1.0	0.5	1.6	0.26	35.31
94BCW2870	original	4	2.5	640	1.5	2	7	55	1	1.93	9	2.07	76	8.1	<0.5	9.5	2.3	85	37	74	28	5.2	1.3	0.5	2.4	0.39	32.53
94BCW2870	duplicate	6	3.2	560	<0.5	2	6	57	2	1.83	8	2.04	65	7.8	0.9	9.4	2.9	54	34	65	27	4.7	1.2	0.7	2.1	0.31	28.91
94BCW2875	original	14	4.0	530	2.3	1	7	62	2	2.06	6	1.81	57	8.2	<0.5	7.8	2.3	66	28	51	22	3.8	1.0	<0.5	1.6	0.26	31.26
94BCW2875	duplicate	11	4.8	560	2.6	1	8	66	2	2.23	7	1.90	49	8.8	0.6	8.2	2.3	67	30	54	22	4.1	1.1	0.6	1.9	0.28	31.03
94BCW3101	original	2	2.2	570	<0.5	<1	6	55	2	1.78	7	1.94	57	7.9	<0.5	11.0	3.1	<50	36	67	25	4.8	1.1	<0.5	1.8	0.30	30.68
94BCW3101	duplicate	<2	2.3	540	<0.5	1	7	56	2	1.77	7	1.88	60	7.6	<0.5	12.0	3.8	<50	35	68	25	4.6	1.1	0.7	1.9	0.29	28.91
94BCW3106	original	<2	2.6	520	2.2	2	6	51	2	1.77	6	1.99	67	7.1	<0.5	9.4	2.1	<50	29	54	22	4.0	1.0	0.6	1.6	0.25	34.55
94BCW3106	duplicate	<2	2.6	620	2.5	1	6	56	2	1.84	7	2.10	67	7.5	0.7	10.0	2.1	57	30	58	24	4.3	1.0	<0.5	1.8	0.26	31.62
94BCW3107	original	24	3.2	560	3.3	<1	7	58	2	1.93	7	1.83	53	7.7	0.9	9.8	2.3	<50	32	59	22	4.3	1.0	<0.5	1.8	0.28	33.76
94BCW3107	duplicate	5	3.2	560	3.2	1	7	59	2	1.98	7	1.85	57	7.9	1.2	9.9	2.9	77	32	61	27	4.4	1.1	0.6	1.9	0.29	30.89
94BCW3109	original	4	2.3	560	4.8	1	7	65	3	2.11	7	1.94	76	8.4	0.8	12.0	3.7	60	35	67	26	4.8	1.1	0.6	2.0	0.30	27.74
94BCW3109	duplicate	3	2.4	550	4.2	1	7	63	3	2.07	7	1.87	72	8.3	0.9	11.0	3.4	57	35	63	28	4.7	1.1	0.6	1.9	0.27	27.17
94BCW3113	original	<2	2.3	530	3.5	2	6	49	2	1.61	6	2.03	59	6.9	<0.5	8.8	2.1	<50	28	53	19	3.9	1.0	<0.5	1.7	0.24	33.94
94BCW3113	duplicate	<2	2.3	560	3.3	2	6	48	2	1.67	6	2.03	60	6.8	<0.5	8.9	2.2	<50	28	54	20	4.0	1.0	<0.5	1.7	0.26	33.08
94BCW3115	original	<2	2.8	580	3.1	1	6	53	2	1.81	8	1.88	61	7.4	1.0	10.0	2.4	<50	34	65	23	4.6	1.1	0.6	1.9	0.30	32.83
94BCW3115	duplicate	7	3.3	590	3.5	1	7	61	3	2.02	8	2.01	58	8.0	<0.5	12.0	3.0	<50	37	73	32	5.2	1.2	0.9	2.3	0.31	30.06
94BCW3119	original	3	1.9	460	5.0	2	5	45	2	1.56	7	1.80	48	6.0	0.9	12.0	2.8	66	33	64	26	4.4	1.0	<0.5	1.6	0.26	33.29
94BCW3119	duplicate	<2	3	540	5.9	<1	6	50	2	1.75	8	1.97	66	6.6	0.7	13.0	2.9	<50	38	70	28	4.8	1.1	0.6	1.9	0.28	30.81
94BCW3122	original	5	2.4	570	3.5	<1	6	50	1	1.62	7	1.85	52	6.5	<0.5	11.0	2.5	<50	34	65	27	4.5	1.0	0.6	1.9	0.29	30.70
94BCW3122	duplicate	4	1.6	650	4.5	2	7	60	2	1.87	9	2.15	58	7.7	<0.5	14.0	2.9	51	41	77	28	5.5	1.4	0.8	2.2	0.32	30.41
94BCW3124	original	<2	2.6	460	2.4	<1	5	43	1	1.46	5	1.49	43	6.0	<0.5	7.0	2.6	<50	25	47	21	3.3	0.9	<0.5	1.4	0.18	38.84
94BCW3124	duplicate	<2	3.3	660	2.9	<1	7	67	3	2.13	7	2.08	63	8.3	1.2	11.0	4.1	<50	35	69	30	4.7	1.3	<0.5	1.9	0.27	27.88
94BCW3126	original	<2	1.9	540	2.3	1	6	48	2	1.58	8	1.96	57	6.3	<0.5	17.0	2.6	<50	41	76	29	5.3	1.0	0.7	1.9	0.28	36.55
94BCW3126	duplicate	<2	1.8	670	2.7	1	6	52	2	1.66	9	1.98	71	6.5	<0.5	19.0	2.9	<50	45	85	37	6.0	1.2	0.6	2.0	0.34	34.01
94BCW3132	original	6	2.3	520	<0.5	2	7	54	2	1.81	7	1.99	61	7.4	0.9	8.4	2.4	<50	29	57	21	3.9	1.0	<0.5	1.8	0.25	35.48
94BCW3132	duplicate	8	2.8	610	<0.5	2	7	63	2	1.83	7	1.99	58	7.6	0.9	9.2	1.7	<50	29	58	21	4.1	1.2	0.6	1.8	0.28	31.97
94BCW3166	original	6	2.8	540	<0.5	1	7	61	2	1.96	8	2.03	65	8.1	<0.5	13.0	2.9	71	39	76	32	5.3	1.3	0.7	2.2	0.33	30.97
94BCW3166	duplicate	7	3.5	550	<0.5	<1	7	60	2	1.91	8	1.98	62	7.9	<0.5	13.0	3.3	68	38	77	31	5.2	1.2	<0.5	2.1	0.33	32.85
94BCW3177	original	4	<0.5	490	3.2	1	5	49	2	1.68	7	1.78	58	7.0	0.8	10.0	2.5	69	32	58	29	4.3	1.0	0.6	1.8	0.29	34.92
94BCW3177	duplicate	3	1.1	490	3.4	2	6	57	2	1.73	8	1.84	53	7.1	<0.5	11.0	2.6	<50	33	63	27	4.6	1.1	0.8	2.0	0.30	32.70
94BCW3182	original	10	2.3	440	5.6	2	4	44	1	1.57	7	1.74	58	6.2	1.1	8.7	2.6	<50	28	52	19	3.7	1.0	0.6	1.6	0.26	32.16
94BCW3182	duplicate	<2	2.6	610	6.0	2	5	50	2	1.72	7	1.92	56	6.8	<0.5	9.5	3.1	<50	30	59	24	4.2	1.1	<0.5	1.8	0.28	32.85

Appendix G.2 Analytical quality control data for INAA analysis of <0.063 mm fraction

Sample	Element	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Na	Rb	Sc	Ta	Th	U	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
	Units	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
	Detection Limit	2	0.5	50	0.5	1	1	5	1	0.01	1	0.01	5	0.1	0.5	0.2	0.5	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05	0.00
94BCW3196	original	7	3.2	570	4.6	2	5	54	2	1.84	9	1.97	49	7.4	<0.5	11.0	3.2	51	37	70	30	5.0	1.2	0.7	2.0	0.33	32.15
94BCW3196	duplicate	5	3.1	590	5.3	1	7	57	2	1.90	10	2.06	56	7.9	0.8	12.0	3.9	<50	40	76	31	5.5	1.2	0.7	2.2	0.32	31.37

Standards

TCA8010	Standard	190	8.3	550	2.7	2	10	62	1	2.45	8	2.06	58	11.0	0.6	6.7	1.5	58	30	55	28	4.3	1.3	0.6	2.0	0.32	30.63
TCA8010	Standard	186	7.6	530	2.7	1	9	60	1	2.32	7	1.95	55	11.0	0.6	6.6	1.8	82	29	51	22	4.0	1.1	0.5	2.1	0.31	32.15
TCA8010	Standard	177	7.1	520	3.1	2	9	57	1	2.32	8	2.03	52	10.0	0.6	6.5	1.1	61	28	49	21	3.8	1.1	0.6	2.0	0.30	32.51
TCA8010	Standard	176	7.2	530	<0.5	2	9	59	1	2.33	8	2.06	50	10.0	0.5	6.6	1.4	84	28	51	23	4.0	1.2	<0.5	2.0	0.32	30.05
Previously analysed standard TCA8010																											
(N=28)	Mean	183	7.5	600	2.2	2	9	58	1	2.40	8	2.04	55	10.3	0.2	6.4	1.3	76	28	52	22	4.2	1.2	0.4	2.1	0.33	32.67

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	14	94BCW310	till	0.25-0.5	orange	almandine	38.65	0.11	21.41	0.05	29.72	0.51	3.66	7.98	0.00	0.00	102.08
T663	15	94BCW310	till	0.25-0.5	black	Ilmenite	0.00	52.00	0.04	0.00	46.76	0.43	0.52	0.04	0.00	0.00	99.80
T663	16	94BCW310	till	0.25-0.5	black	Ilmenite	0.00	48.93	0.07	0.07	48.75	0.38	0.59	0.02	0.01	0.00	98.82
T663	17	94BCW310	till	0.25-0.5	green	Cr-diopside	55.11	0.18	0.98	1.35	2.37	0.11	17.62	22.60	1.06	0.05	101.42
T663	18	94BCW310	till	0.25-0.5	green	Cr-diopside	55.14	0.18	1.65	1.16	2.64	0.09	18.02	20.92	1.25	0.06	101.11
T663	19	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.75	0.23	1.35	1.53	2.41	0.04	17.76	21.66	1.14	0.05	100.91
T663	20	94BCW310	till	0.25-0.5	green	Cr-diopside	55.40	0.09	1.30	1.16	2.49	0.09	18.08	21.69	1.01	0.04	101.35
T663	21	94BCW310	till	0.25-0.5	green	Cr-diopside	55.27	0.16	1.62	1.26	2.52	0.10	17.97	20.74	1.28	0.05	100.96
T663	22	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.25	0.18	1.40	1.52	2.18	0.09	17.61	21.54	1.18	0.04	100.99
T663	23	94BCW310	till	0.25-0.5	green	Cr-diopside	55.42	0.25	1.38	1.11	2.61	0.11	17.84	21.55	1.14	0.04	101.46
T663	24	94BCW310	till	0.25-0.5	green	Cr-diopside	55.12	0.11	1.41	1.09	2.80	0.11	18.86	20.53	1.08	0.06	101.16
T704	70	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.64	0.17	18.03	7.32	7.05	0.41	20.95	5.68	0.00	0.01	100.26
T704	71	94BCW310	till	0.5-0.84	orange	almandine	36.19	0.00	20.55	0.02	29.33	8.24	1.74	3.36	0.02	0.00	99.43
T704	72	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.52	0.19	1.65	1.66	2.55	0.11	17.75	20.49	1.43	0.02	100.37
T704	73	94BCW310	till	0.5-0.84	green	Cr-diopside	53.51	0.13	1.62	1.19	2.75	0.16	17.67	20.41	1.24	0.06	98.73
T663	25	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.95	0.23	20.97	3.72	7.42	0.35	21.73	4.98	0.00	0.00	102.35
T663	26	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.50	0.05	17.96	8.06	7.81	0.54	19.23	6.52	0.01	0.01	101.68
T663	27	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.75	0.06	19.11	6.11	7.67	0.44	20.15	5.98	0.00	0.02	101.30
T663	28	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.26	0.27	19.37	5.20	7.34	0.31	21.17	5.24	0.03	0.01	101.19
T663	29	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.34	0.06	16.90	9.23	8.02	0.45	18.78	6.84	0.00	0.00	101.63
T663	30	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.20	0.47	19.09	5.85	8.30	0.52	19.28	6.82	0.02	0.00	102.54
T663	31	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.58	0.02	18.95	7.20	6.96	0.33	20.52	6.45	0.00	0.00	103.01
T663	32	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.88	0.46	19.45	4.91	7.99	0.38	19.68	6.40	0.06	0.03	101.23
T663	33	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.61	0.05	18.57	6.94	7.44	0.48	20.65	5.03	0.03	0.02	100.81
T663	34	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.34	0.16	17.28	8.34	7.20	0.43	20.50	5.79	0.01	0.02	101.07
T663	35	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.39	0.19	19.79	5.09	7.27	0.37	20.87	5.44	0.00	0.00	101.40
T663	36	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.71	0.60	18.28	6.03	7.58	0.33	20.32	5.78	0.05	0.02	100.70
T663	37	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.95	0.61	18.23	6.08	7.95	0.38	20.48	5.88	0.03	0.00	101.59
T663	38	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.70	0.02	18.42	7.14	7.55	0.43	20.90	4.85	0.00	0.00	101.01
T663	39	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.48	0.62	17.55	6.69	8.44	0.50	17.65	8.83	0.02	0.00	101.78
T663	40	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.84	0.01	17.86	8.19	7.26	0.57	20.38	5.54	0.03	0.00	101.67
T663	41	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.85	0.43	19.63	4.96	8.11	0.43	20.04	6.24	0.03	0.00	101.72
T663	42	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.64	0.09	17.92	7.73	7.23	0.49	20.00	6.44	0.02	0.02	101.56
T663	43	94BCW310	till	0.25-0.5	purple	Cr-pyrope	43.40	0.22	21.29	3.60	7.88	0.42	21.93	4.63	0.04	0.00	103.41
T663	44	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.03	0.03	18.70	6.95	7.72	0.39	21.17	4.70	0.00	0.00	101.70
T663	45	94BCW310	till	0.25-0.5	orange	almandine	38.70	0.00	28.02	0.00	32.67	0.45	5.38	1.11	0.02	0.03	106.37
T663	46	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.82	0.07	16.33	9.70	7.23	0.43	19.66	7.05	0.00	0.00	102.29
T663	47	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.21	0.02	18.96	7.05	7.59	0.52	20.76	4.93	0.01	0.02	102.07
T663	48	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.08	0.03	18.61	7.09	8.63	0.60	19.45	5.89	0.00	0.02	102.39
T663	49	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.73	0.01	18.74	6.96	7.99	0.46	19.40	6.23	0.00	0.00	101.52
T663	50	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.79	0.00	18.85	6.52	7.20	0.46	20.31	6.32	0.00	0.01	101.46
T663	51	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.89	0.03	18.23	7.59	7.40	0.41	19.81	6.30	0.02	0.01	101.69
T663	52	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.48	0.03	18.98	6.54	8.41	0.63	18.62	6.65	0.00	0.01	101.35
T663	53	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.98	0.09	19.89	5.80	7.86	0.61	19.68	5.72	0.00	0.01	101.65
T663	54	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.93	0.46	18.54	6.32	7.71	0.44	20.84	5.32	0.07	0.00	101.62
T663	55	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.68	0.17	17.05	8.27	7.39	0.38	19.70	6.58	0.00	0.00	101.22
T663	56	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.70	0.03	21.27	4.13	6.94	0.33	24.03	2.09	0.02	0.00	101.53
T663	57	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.13	0.22	18.72	6.52	7.13	0.37	20.81	5.82	0.01	0.01	101.73
T663	58	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.51	0.21	19.11	5.96	7.37	0.39	20.99	5.16	0.02	0.00	100.73
T663	59	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.99	0.40	18.32	6.44	7.69	0.34	20.45	5.34	0.03	0.00	101.01
T663	60	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.76	0.02	19.23	6.07	7.52	0.42	19.90	5.86	0.02	0.01	100.79
T663	61	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.80	0.08	20.15	4.66	7.67	0.45	20.56	5.37	0.00	0.00	100.74

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	62	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.72	0.00	18.98	6.69	7.26	0.43	19.78	6.00	0.02	0.03	100.91
T663	63	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.94	0.26	19.34	5.48	7.10	0.38	21.22	5.00	0.03	0.00	100.73
T663	64	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.34	0.27	15.53	8.00	6.84	0.37	17.35	6.04	0.00	0.01	94.75
T663	65	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.79	0.04	18.20	7.44	7.60	0.40	20.60	4.93	0.02	0.01	101.02
T663	66	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.98	0.23	18.53	6.75	7.15	0.40	20.68	5.46	0.01	0.01	101.21
T663	67	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.80	0.08	19.63	5.61	9.00	0.51	19.08	6.06	0.00	0.01	101.77
T663	68	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.74	0.01	19.02	6.45	7.47	0.40	20.15	5.65	0.02	0.01	100.93
T663	69	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.12	0.45	19.62	4.88	8.19	0.43	19.76	6.45	0.05	0.03	101.97
T663	70	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.80	0.42	18.84	5.50	8.56	0.47	18.61	7.44	0.01	0.01	101.66
T663	71	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.33	0.16	17.33	8.05	7.25	0.36	20.03	6.39	0.00	0.01	100.91
T663	72	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.77	0.45	19.42	4.59	8.37	0.32	20.22	6.22	0.05	0.00	101.42
T663	73	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.63	0.17	21.94	2.43	8.13	0.40	21.49	4.42	0.02	0.02	101.64
T663	74	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.64	0.33	19.51	5.10	8.46	0.40	19.72	6.70	0.03	0.03	101.91
T663	75	94BCW310	till	0.25-0.5	orange	almandine	37.60	0.01	21.23	0.02	37.40	0.18	3.22	1.93	0.00	0.02	101.60
T663	76	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.98	0.12	17.88	7.31	7.63	0.39	20.26	6.27	0.00	0.01	101.86
T663	77	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.70	0.05	16.75	9.85	7.21	0.53	20.90	4.60	0.01	0.03	101.63
T663	78	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.73	0.00	18.24	7.90	7.33	0.43	21.30	4.47	0.01	0.00	101.41
T663	79	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.60	0.05	16.83	9.13	7.08	0.46	19.50	6.84	0.00	0.00	101.48
T663	80	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.73	0.37	18.84	6.15	7.33	0.41	20.50	5.53	0.04	0.00	100.89
T663	81	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.63	0.24	18.63	6.59	6.85	0.40	20.98	5.20	0.02	0.03	100.56
T663	82	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.49	0.46	19.50	4.82	8.00	0.37	19.52	6.56	0.03	0.01	100.77
T663	83	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.36	0.43	18.25	6.69	7.14	0.37	20.27	5.58	0.01	0.00	100.10
T663	84	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.83	0.11	21.67	2.89	8.76	0.41	20.20	4.91	0.00	0.02	100.78
T663	85	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.14	0.25	20.99	3.65	7.68	0.40	21.66	4.52	0.02	0.00	101.29
T663	86	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.12	0.00	17.67	7.97	7.10	0.37	19.58	6.53	0.00	0.00	100.33
T663	87	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.47	0.32	19.72	4.45	7.93	0.36	20.48	5.18	0.02	0.00	99.93
T663	88	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.03	0.17	19.66	4.97	7.18	0.34	20.92	5.49	0.05	0.00	100.81
T663	89	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.54	0.28	19.16	5.55	7.58	0.42	20.87	5.06	0.02	0.01	100.50
T663	90	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.14	0.01	19.76	5.51	7.18	0.36	22.50	2.97	0.00	0.00	100.44
T663	91	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.72	0.00	18.53	7.01	7.30	0.49	20.95	4.62	0.04	0.00	100.65
T663	92	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.29	0.01	17.40	8.23	7.15	0.49	19.65	6.32	0.03	0.00	100.55
T663	93	94BCW310	till	0.25-0.5	green	Cr-diopside	54.73	0.11	1.22	1.04	2.71	0.09	18.43	20.96	0.96	0.06	100.32
T663	94	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.77	0.24	1.27	1.91	2.46	0.13	17.15	21.13	1.52	0.03	100.61
T663	95	94BCW310	till	0.25-0.5	green	Cr-diopside	54.88	0.10	1.39	1.11	2.54	0.11	18.04	21.65	1.02	0.04	100.86
T663	96	94BCW310	till	0.25-0.5	green	Cr-diopside	54.79	0.17	1.73	1.33	2.57	0.08	17.80	20.79	1.38	0.03	100.67
T663	97	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.93	0.21	1.36	1.78	2.51	0.09	17.18	21.16	1.46	0.01	100.70
T663	98	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.89	0.20	1.64	1.64	2.55	0.10	17.39	20.70	1.60	0.05	100.77
T663	99	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.02	0.21	0.96	2.15	2.12	0.13	17.47	21.77	1.27	0.04	101.13
T663	100	94BCW310	till	0.25-0.5	green	Cr-diopside	54.71	0.12	1.40	1.13	2.56	0.16	18.11	21.38	1.08	0.06	100.71
T663	101	94BCW310	till	0.25-0.5	green	Cr-diopside	54.80	0.16	2.30	1.41	2.77	0.12	17.23	19.57	1.90	0.04	100.29
T663	102	94BCW310	till	0.25-0.5	green	Cr-diopside	55.06	0.17	0.91	1.36	2.63	0.13	17.30	22.19	1.08	0.01	100.83
T663	103	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.81	0.24	1.40	3.36	2.21	0.16	16.80	19.46	2.08	0.03	100.55
T663	104	94BCW310	till	0.25-0.5	green	Cr-diopside	55.19	0.22	0.88	1.27	2.42	0.11	17.57	22.10	1.05	0.02	100.83
T663	105	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.74	0.20	0.57	1.80	1.67	0.04	17.44	22.94	1.01	0.05	100.44
T663	106	94BCW310	till	0.25-0.5	green	Cr-diopside	55.05	0.32	1.72	1.42	2.60	0.12	17.52	20.39	1.64	0.03	100.81
T663	107	94BCW310	till	0.25-0.5	green	Cr-diopside	54.69	0.10	1.29	1.05	2.49	0.12	18.25	21.05	1.03	0.08	100.15
T663	108	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.32	0.05	1.34	1.55	2.68	0.09	17.95	20.72	1.16	0.07	99.93
T663	109	94BCW310	till	0.25-0.5	green	Cr-diopside	54.94	0.12	1.50	1.15	2.60	0.11	17.84	21.26	1.05	0.04	100.61
T663	110	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.84	0.20	1.30	1.95	2.45	0.06	17.11	21.21	1.32	0.05	99.49
T663	111	94BCW310	till	0.25-0.5	green	Cr-diopside	54.60	0.17	1.40	1.16	2.64	0.16	18.12	20.89	1.14	0.08	100.35
T663	112	94BCW310	till	0.25-0.5	green	Cr-diopside	54.31	0.10	1.45	1.16	2.62	0.03	17.78	21.65	1.13	0.06	100.30
T663	113	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.20	0.19	1.74	3.09	2.53	0.14	16.41	19.84	1.94	0.06	100.13

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T663	114	94BCW310	till	0.25-0.5	green	Cr-diopside	54.56	0.20	1.21	1.30	2.32	0.11	17.49	21.60	1.19	0.05	100.03
T663	115	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.99	0.25	1.42	2.18	2.33	0.08	16.90	20.77	1.65	0.03	100.61
T663	116	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.89	0.09	1.86	3.25	2.12	0.07	16.45	19.07	2.26	0.01	100.06
T663	117	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.77	0.20	1.44	2.16	2.37	0.12	16.88	20.44	1.64	0.03	100.04
T663	118	94BCW310	till	0.25-0.5	green	Cr-diopside	54.56	0.16	0.66	0.53	2.83	0.10	17.82	23.30	0.71	0.03	100.71
T663	119	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.27	0.06	1.27	1.56	2.54	0.08	18.44	20.56	1.10	0.08	99.94
T663	120	94BCW310	till	0.25-0.5	green	Cr-diopside	54.28	0.20	0.92	1.48	2.39	0.16	17.49	22.59	1.11	0.02	100.65
T663	121	94BCW310	till	0.25-0.5	green	Cr-diopside	54.68	0.19	1.69	1.31	2.52	0.10	17.54	20.80	1.29	0.04	100.16
T663	122	94BCW310	till	0.25-0.5	green	Cr-diopside	54.43	0.10	1.42	1.10	2.47	0.09	18.07	21.30	1.04	0.06	100.07
T663	123	94BCW310	till	0.25-0.5	green	Cr-diopside	54.72	0.20	1.70	1.32	2.65	0.10	17.90	20.94	1.33	0.03	100.88
T663	124	94BCW310	till	0.25-0.5	green	Cr-diopside	55.03	0.07	1.20	1.07	2.71	0.09	18.51	21.14	0.95	0.06	100.85
T663	125	94BCW310	till	0.25-0.5	green	Cr-diopside	55.31	0.20	1.72	1.31	2.56	0.05	17.90	20.71	1.42	0.05	101.24
T663	126	94BCW310	till	0.25-0.5	green	Cr-diopside	54.99	0.20	1.73	1.23	2.51	0.09	17.83	20.84	1.33	0.03	100.77
T663	127	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.76	0.21	1.32	2.05	2.25	0.09	17.44	21.29	1.39	0.04	100.83
T663	128	94BCW310	till	0.25-0.5	green	Cr-diopside	54.86	0.17	1.67	1.11	2.90	0.11	18.30	20.17	1.32	0.04	100.64
T663	129	94BCW310	till	0.25-0.5	green	Cr-diopside	54.91	0.16	1.67	1.32	2.60	0.10	17.87	20.87	1.35	0.04	100.89
T663	130	94BCW310	till	0.25-0.5	green	Cr-diopside	54.60	0.11	1.36	1.13	2.54	0.09	17.76	21.52	1.02	0.04	100.18
T663	131	94BCW310	till	0.25-0.5	green	Cr-diopside	54.32	0.20	1.35	1.32	2.46	0.10	17.43	21.74	1.07	0.08	100.09
T663	132	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.26	0.22	1.92	2.64	2.56	0.15	16.68	18.75	2.14	0.04	99.33
T663	133	94BCW310	till	0.25-0.5	green	Cr-diopside	54.10	0.17	1.68	1.45	2.31	0.12	17.46	20.78	1.32	0.05	99.45
T663	134	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.28	0.20	1.39	2.18	2.46	0.09	16.87	20.71	1.71	0.05	99.94
T663	135	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.34	0.12	1.30	2.99	2.06	0.05	16.31	21.24	1.65	0.06	100.10
T663	136	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.22	0.18	0.80	1.67	1.86	0.07	17.83	22.23	1.13	0.04	101.04
T663	137	94BCW310	till	0.25-0.5	green	Cr-diopside	54.08	0.10	1.29	1.11	2.59	0.14	17.79	21.36	0.99	0.03	99.48
T663	138	94BCW310	till	0.25-0.5	green	Cr-diopside	54.45	0.11	1.25	1.06	2.62	0.07	18.21	21.09	0.99	0.06	99.91
T663	139	94BCW310	till	0.25-0.5	green	Cr-diopside	54.16	0.14	1.66	1.36	2.58	0.11	17.56	21.15	1.35	0.04	100.10
T663	140	94BCW310	till	0.25-0.5	green	Cr-diopside	54.33	0.19	1.68	1.17	2.81	0.07	18.47	19.91	1.32	0.03	99.98
T663	141	94BCW310	till	0.25-0.5	green	Cr-diopside	54.51	0.22	1.31	1.37	2.49	0.11	17.25	21.56	1.15	0.06	100.02
T663	142	94BCW310	till	0.25-0.5	green	Cr-diopside	54.27	0.14	1.68	1.24	2.47	0.07	17.80	20.55	1.28	0.03	99.54
T663	143	94BCW310	till	0.25-0.5	green	Diopside	53.76	0.02	0.88	0.18	4.32	0.21	17.30	23.19	0.36	0.00	100.22
T663	144	94BCW310	till	0.25-0.5	green	Feldspar	64.12	0.03	15.14	0.01	2.60	0.02	4.32	3.29	6.65	1.11	97.29
T663	145	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.94	0.20	1.05	2.57	2.62	0.09	17.47	19.96	1.65	0.06	100.60
T663	146	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.44	0.20	0.74	1.86	2.17	0.13	17.23	22.16	1.08	0.04	100.03
T663	147	94BCW310	till	0.25-0.5	green	Cr-diopside	52.88	0.14	1.59	0.65	4.07	0.10	16.40	23.70	0.36	0.01	99.89
T663	148	94BCW310	till	0.25-0.5	green	Cr-diopside	54.54	0.26	1.51	0.77	2.86	0.07	17.50	21.19	1.34	0.07	100.11
T663	149	94BCW310	till	0.25-0.5	green	Cr-diopside	54.48	0.12	1.30	1.07	2.57	0.15	18.15	21.34	0.99	0.03	100.19
T663	150	94BCW310	till	0.25-0.5	green	Cr-diopside	54.46	0.21	1.71	1.32	2.46	0.07	17.67	21.02	1.31	0.07	100.31
T663	151	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.86	0.24	1.22	1.81	2.20	0.06	17.12	21.67	1.35	0.03	100.57
T663	152	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.47	0.24	1.27	1.62	2.38	0.06	17.44	21.36	1.42	0.03	100.29
T664	1	94BCW310	till	0.25-0.5	black	ilmenite	0.00	52.35	0.05	0.03	47.70	0.37	0.26	0.02	0.01	0.02	100.80
T664	2	94BCW310	till	0.25-0.5	black	ilmenite	0.00	50.08	0.03	0.05	48.99	0.64	0.43	0.01	0.00	0.00	100.23
T664	3	94BCW310	till	0.25-0.5	black	ilmenite	0.00	52.58	0.05	0.00	47.26	0.42	0.18	0.02	0.00	0.01	100.52
T664	4	94BCW310	till	0.25-0.5	black	chromite	0.03	2.44	1.59	57.84	28.90	0.47	8.75	0.01	0.01	0.00	100.02
T664	5	94BCW310	till	0.25-0.5	black	ilmenite	0.00	51.68	0.01	0.00	46.91	0.90	0.26	0.02	0.00	0.00	99.78
T664	6	94BCW310	till	0.25-0.5	black	ilmenite	0.00	52.33	0.07	0.02	46.99	1.25	0.12	0.02	0.00	0.00	100.80
T664	7	94BCW310	till	0.25-0.5	black	rutile	0.00	97.27	0.06	0.37	0.23	0.01	0.03	0.02	0.00	0.00	97.98
T664	8	94BCW310	till	0.25-0.5	black	chromite	0.09	1.69	5.10	52.94	30.76	0.31	8.42	0.00	0.00	0.00	99.31
T664	9	94BCW310	till	0.25-0.5	orange	almandine	38.09	0.08	21.71	0.04	28.92	2.03	4.38	6.95	0.04	0.00	102.24
T664	10	94BCW310	till	0.25-0.5	pl green	enstatite	57.75	0.01	1.20	0.41	4.29	0.14	37.08	0.36	0.00	0.01	101.25
T664	11	94BCW310	till	0.25-0.5	pl green	epidote	38.04	0.15	25.15	0.00	10.28	0.16	0.04	24.10	0.00	0.01	97.93
T664	12	94BCW310	till	0.25-0.5	pl green	enstatite	57.93	0.00	0.51	0.27	4.49	0.10	37.27	0.38	0.07	0.01	101.03
T704	74	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.40	0.20	19.20	5.19	7.50	0.40	21.17	5.34	0.01	0.01	100.41

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T704	75	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.70	0.26	19.27	5.22	7.75	0.35	21.64	4.96	0.02	0.01	100.17
T704	76	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.50	0.16	18.04	7.18	7.15	0.37	20.88	5.49	0.04	0.00	100.80
T704	77	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.24	0.49	19.35	4.58	7.70	0.38	21.49	4.95	0.05	0.02	100.26
T704	78	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.21	0.25	18.10	7.27	7.15	0.45	21.17	5.50	0.04	0.00	101.14
T704	79	94BCW310	till	0.5-0.84	purple	Cr-pyrope	42.25	0.30	17.81	6.92	7.62	0.40	19.71	5.88	0.00	0.01	100.90
T704	80	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.46	0.04	17.41	8.60	7.25	0.47	20.08	5.78	0.01	0.00	101.10
T704	81	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.88	0.57	18.36	5.79	8.44	0.37	19.39	6.74	0.02	0.00	100.56
T704	82	94BCW310	till	0.5-0.84	green	Cr-diopside	53.59	0.18	0.93	1.36	2.45	0.09	17.45	22.01	1.09	0.04	99.18
T704	83	94BCW310	till	0.5-0.84	green	Cr-diopside	53.35	0.00	1.22	1.03	2.78	0.12	18.72	20.89	0.97	0.06	99.12
T704	84	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.89	0.24	1.70	1.69	2.79	0.15	17.08	19.69	1.77	0.02	100.02
T704	85	94BCW310	till	0.5-0.84	green	Cr-diopside	53.69	0.18	1.32	0.98	2.53	0.09	17.64	21.18	1.31	0.02	98.96
T704	86	94BCW310	till	0.5-0.84	green	Cr-diopside	54.33	0.04	1.27	1.11	2.72	0.11	18.77	20.68	1.06	0.06	100.16
T704	87	94BCW310	till	0.5-0.84	green	Cr-diopside	53.72	0.27	1.38	1.01	2.76	0.09	17.72	21.20	1.04	0.04	99.23
T704	88	94BCW310	till	0.5-0.84	green	Cr-diopside	53.84	0.35	1.37	1.17	2.33	0.13	18.00	21.12	1.13	0.05	99.47
T704	89	94BCW310	till	0.5-0.84	green	Cr-diopside	54.67	0.16	1.55	1.22	2.68	0.11	17.98	20.29	1.33	0.06	100.05
T704	90	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.26	0.33	1.36	2.09	2.45	0.09	17.22	20.52	1.71	0.03	100.06
T704	91	94BCW310	till	0.5-0.84	green	Cr-diopside	55.11	0.16	1.33	0.92	2.94	0.08	17.59	20.91	1.18	0.06	100.27
T704	92	94BCW310	till	0.5-0.84	green	Cr-diopside	54.27	0.23	1.60	1.48	2.70	0.09	17.34	20.61	1.41	0.05	99.78
T704	93	94BCW310	till	0.5-0.84	green	Cr-diopside	55.24	0.01	1.33	1.07	2.67	0.10	18.04	21.35	1.07	0.05	100.94
T704	94	94BCW310	till	0.5-0.84	green	Cr-diopside	54.88	0.08	1.28	1.12	2.73	0.12	18.03	20.96	1.02	0.08	100.28
T704	95	94BCW310	till	0.5-0.84	green	Cr-diopside	54.25	0.10	1.63	1.38	2.66	0.13	18.58	19.66	1.40	0.07	99.85
T664	13	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.51	0.03	20.19	6.03	7.22	0.47	23.43	2.40	0.00	0.01	102.29
T664	14	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.28	0.05	18.82	7.20	7.71	0.47	19.33	6.56	0.00	0.00	101.42
T664	15	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.68	0.03	19.23	6.70	7.00	0.41	20.28	6.16	0.00	0.00	101.47
T664	16	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.44	0.36	16.92	8.25	7.71	0.39	19.73	6.62	0.01	0.00	100.43
T664	17	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.19	0.10	19.28	6.24	7.84	0.46	20.73	5.16	0.02	0.00	101.02
T664	18	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.97	0.03	18.80	7.35	8.01	0.53	19.58	6.38	0.01	0.00	101.66
T664	19	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.20	0.07	20.01	5.89	7.45	0.50	20.73	5.72	0.04	0.00	102.61
T664	20	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.18	0.51	20.16	4.64	8.00	0.39	20.25	6.45	0.02	0.00	102.60
T664	21	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.92	0.31	19.94	4.75	8.12	0.40	20.27	6.23	0.01	0.00	101.94
T664	22	94BCW310	till	0.25-0.5	black	ilmenite	0.00	47.29	0.05	0.01	50.34	1.45	0.19	0.01	0.02	0.01	99.34
T664	23	94BCW310	till	0.25-0.5	black	tourmaline	36.68	0.55	33.66	0.01	10.96	0.04	4.63	0.53	1.89	0.05	88.98
T664	24	94BCW310	till	0.25-0.5	green	Cr-diopside	55.25	0.23	1.17	1.39	2.25	0.08	17.71	22.11	1.27	0.05	101.50
T664	25	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.35	0.28	2.35	2.37	2.74	0.11	17.22	18.87	2.42	0.05	101.77
T664	26	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.22	0.12	0.26	1.98	1.76	0.10	17.81	22.83	1.24	0.01	101.33
T664	27	94BCW310	till	0.25-0.5	green	Cr-diopside	54.60	0.17	1.70	1.38	2.63	0.09	18.11	20.89	1.49	0.05	101.11
T664	28	94BCW310	till	0.25-0.5	green	Cr-diopside	54.75	0.20	1.50	0.96	2.93	0.10	18.36	20.57	1.25	0.07	100.69
T664	29	94BCW310	till	0.25-0.5	green	HiCr-diopsid	55.09	0.11	0.36	1.72	1.41	0.04	17.94	23.67	0.97	0.04	101.34
T664	30	94BCW310	till	0.25-0.5	green	Cr-diopside	53.85	0.18	1.75	1.26	2.51	0.12	17.56	21.02	1.45	0.03	99.72
T664	31	94BCW310	till	0.25-0.5	green	Cr-diopside	54.63	0.09	1.29	1.11	2.68	0.13	18.09	21.46	1.14	0.04	100.66
T664	32	94BCW310	till	0.25-0.5	green	Cr-diopside	54.42	0.23	1.35	1.35	2.31	0.08	17.92	21.69	1.27	0.05	100.66
T664	33	94BCW310	till	0.25-0.5	green	Cr-diopside	54.58	0.21	1.37	1.17	2.47	0.09	17.46	22.15	1.25	0.03	100.78
T664	34	94BCW310	till	0.25-0.5	green	Cr-diopside	53.64	0.09	1.60	0.64	7.32	0.26	16.92	20.39	0.58	0.00	101.44
T664	35	94BCW310	till	0.25-0.5	green	Cr-diopside	54.20	0.12	1.42	1.01	2.70	0.10	18.62	20.83	1.14	0.06	100.19
T664	36	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.82	0.30	1.38	1.91	2.44	0.10	17.17	21.22	1.67	0.05	100.06
T664	37	94BCW310	till	0.25-0.5	green	Cr-diopside	54.14	0.15	1.62	1.35	2.55	0.12	17.86	20.85	1.45	0.07	100.16
T664	38	94BCW310	till	0.25-0.5	green	Cr-diopside	54.14	0.14	1.52	1.16	2.67	0.14	18.22	21.03	1.27	0.04	100.33
T664	39	94BCW310	till	0.25-0.5	green	Cr-diopside	53.16	0.06	1.75	1.00	4.95	0.17	16.69	22.03	0.70	0.01	100.52
T664	40	94BCW310	till	0.25-0.5	green	Cr-diopside	53.74	0.19	1.71	1.30	2.67	0.09	18.23	20.18	1.47	0.03	99.62
T705	1	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.79	0.46	17.62	7.16	7.46	0.36	20.60	5.81	0.04	0.01	100.30
T705	2	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.08	0.41	19.42	5.69	7.67	0.42	21.72	4.80	0.04	0.02	101.26
T705	3	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.59	0.04	21.04	3.81	8.26	0.52	20.45	5.21	0.01	0.00	100.93

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T705	4	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.66	0.17	18.32	6.92	7.82	0.36	20.36	5.34	0.04	0.00	101.00
T705	5	94BCW310	till	0.5-0.84	orange	almandine	36.97	0.16	21.08	0.03	26.32	1.65	2.18	11.88	0.00	0.00	100.27
T705	6	94BCW310	till	0.5-0.84	green	Cr-diopside	55.12	0.16	1.69	1.41	2.61	0.12	17.93	20.40	1.42	0.05	100.90
T705	7	94BCW310	till	0.5-0.84	green	Cr-diopside	53.17	0.20	1.59	1.26	2.64	0.14	18.14	20.23	1.30	0.05	98.73
T705	8	94BCW310	till	0.5-0.84	green	Cr-diopside	54.37	0.21	1.62	1.41	2.70	0.07	17.31	20.79	1.39	0.06	99.92
T705	9	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.46	0.02	0.73	3.28	1.98	0.09	16.87	20.45	1.77	0.03	99.67
T705	10	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.31	0.29	1.33	1.93	2.50	0.11	17.20	20.36	1.58	0.03	99.64
T705	11	94BCW310	till	0.5-0.84	green	HiCr-diopsid	53.60	0.00	1.30	2.04	2.15	0.11	17.99	20.72	1.44	0.00	99.34
T705	12	94BCW310	till	0.5-0.84	green	Cr-diopside	53.68	0.24	1.29	0.88	2.83	0.07	18.17	21.09	1.03	0.07	99.33
T705	13	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.12	0.07	1.65	1.56	2.57	0.08	17.50	21.04	1.44	0.04	100.05
T705	14	94BCW310	till	0.5-0.84	green	Cr-diopside	54.37	0.06	1.60	1.45	2.61	0.10	17.94	21.08	1.21	0.05	100.48
T705	15	94BCW310	till	0.5-0.84	green	Cr-diopside	54.28	0.14	1.24	1.16	2.66	0.15	18.39	21.06	1.02	0.07	100.17
T705	16	94BCW310	till	0.5-0.84	pl green	enstatite	57.78	0.17	0.39	0.44	4.56	0.12	36.64	0.42	0.11	0.01	100.64
T664	41	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.17	0.11	17.95	7.84	7.22	0.34	20.35	6.13	0.00	0.00	101.11
T664	42	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.24	0.04	19.01	6.84	7.81	0.50	19.58	6.26	0.01	0.00	101.30
T664	43	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.10	0.11	17.45	8.11	7.00	0.36	20.16	6.28	0.03	0.00	100.59
T664	44	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.19	0.03	18.66	7.47	6.99	0.38	20.61	5.68	0.00	0.00	102.02
T664	45	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.67	0.27	19.64	5.32	8.06	0.41	20.18	6.15	0.04	0.02	101.76
T664	46	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.39	0.29	22.02	2.46	8.21	0.46	21.60	4.36	0.01	0.00	101.80
T664	47	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.87	0.14	18.00	7.95	7.27	0.41	20.49	6.12	0.02	0.01	102.28
T664	48	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.61	0.05	19.30	6.66	8.04	0.56	19.40	6.57	0.00	0.01	102.20
T664	49	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.31	0.03	18.46	7.91	7.47	0.55	22.24	2.81	0.00	0.00	100.78
T664	50	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.69	0.42	14.15	12.06	7.75	0.36	18.17	7.86	0.00	0.02	101.48
T664	51	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.50	0.06	16.59	7.71	6.77	0.37	19.08	6.35	0.00	0.02	98.44
T664	52	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.65	0.06	20.16	5.05	7.66	0.44	20.51	5.50	0.02	0.02	101.07
T664	53	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.79	0.16	21.77	3.29	8.45	0.46	20.01	5.89	0.00	0.00	101.82
T664	54	94BCW310	till	0.25-0.5	ilky purpl	almandine	36.56	1.28	21.37	0.00	36.93	0.54	4.83	0.72	0.00	0.01	102.23
T664	55	94BCW310	till	0.25-0.5	ilky purpl	almandine	37.24	0.07	21.54	0.03	35.92	0.28	4.94	1.13	0.01	0.00	101.14
T664	56	94BCW310	till	0.25-0.5	purple	Cr-pyrope	42.71	0.02	21.04	4.94	7.15	0.36	23.34	2.71	0.03	0.00	102.29
T664	57	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.84	0.37	19.66	5.08	8.80	0.41	18.51	7.60	0.00	0.01	102.27
T664	58	94BCW310	till	0.25-0.5	black	tourmaline	36.21	0.12	34.19	0.00	14 60	0.29	0.94	0.06	1.95	0.05	88.40
T664	59	94BCW310	till	0.25-0.5	black	tourmaline	36.91	0.07	35.30	0.00	11.62	0.05	2.48	0.07	1.84	0.03	88.36
T664	60	94BCW310	till	0.25-0.5	black	ilmenite	0.00	51.11	0.08	0.02	47.77	0.51	0.68	0.01	0.00	0.00	100.18
T664	61	94BCW310	till	0.25-0.5	black	Fe-Ti-oxide	0.52	15.68	0.30	0.03	75.06	0.15	0.04	0.12	0.00	0.02	91.92
T664	62	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.91	0.21	1.42	2.08	2.49	0.08	17.29	20.60	1.72	0.05	99.87
T664	63	94BCW310	till	0.25-0.5	green	Cr-diopside	54.13	0.20	1.56	1.17	2.45	0.11	17.65	21.28	1.41	0.03	99.99
T664	64	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.55	0.20	1.16	1.63	2.52	0.17	17.00	21.71	1.31	0.05	99.29
T664	65	94BCW310	till	0.25-0.5	green	Cr-diopside	54.27	0.17	1.67	1.25	2.56	0.06	17.97	20.92	1.43	0.06	100.36
T664	66	94BCW310	till	0.25-0.5	green	Cr-diopside	54.39	0.10	1.30	1.12	2.61	0.13	18.73	21.07	1.11	0.05	100.61
T664	67	94BCW310	till	0.25-0.5	green	Cr-diopside	54.28	0.14	1.43	0.98	2.61	0.08	18.05	21.51	1.16	0.05	100.27
T664	68	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.38	0.24	1.51	2.24	2.50	0.11	17.02	20.39	1.90	0.04	100.32
T664	69	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.75	0.03	1.55	1.75	2.27	0.12	17.64	20.89	1.62	0.02	100.62
T664	70	94BCW310	till	0.25-0.5	green	Cr-diopside	54.85	0.20	1.73	1.09	2.82	0.08	18.59	20.19	1.46	0.06	101.05
T664	71	94BCW310	till	0.25-0.5	green	Cr-diopside	54.63	0.19	1.70	1.23	2.51	0.12	18.00	20.92	1.46	0.04	100.80
T664	72	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.76	0.25	1.13	2.09	2.12	0.08	17.76	20.88	1.78	0.03	100.87
T664	73	94BCW310	till	0.25-0.5	green	Cr-diopside	54.41	0.17	1.77	1.32	2.74	0.14	18.36	20.21	1.61	0.04	100.77
T664	74	94BCW310	till	0.25-0.5	green	Cr-diopside	54.62	0.07	1.31	1.22	2.63	0.07	18.48	21.25	1.22	0.08	100.94
T664	75	94BCW310	till	0.25-0.5	green	Cr-diopside	55.03	0.13	1.48	1.15	2.66	0.08	18.36	21.48	1.23	0.07	101.66
T664	76	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.41	0.26	1.39	1.95	2.57	0.09	17.42	20.69	1.75	0.02	100.55
T664	77	94BCW310	till	0.25-0.5	green	Cr-diopside	54.74	0.10	0.33	1.33	1.79	0.05	17.73	23.87	0.96	0.02	100.93
T664	78	94BCW310	till	0.25-0.5	green	Cr-diopside	54.78	0.11	1.32	1.07	2.66	0.06	18.48	21.88	1.10	0.06	101.52
T664	79	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.59	0.17	1.68	1.55	2.35	0.12	17.78	21.11	1.61	0.06	101.01

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	80	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.45	0.26	1.41	2.20	2.41	0.06	17.12	20.81	1.84	0.01	100.55
T664	81	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.93	0.17	2.40	1.74	2.60	0.08	17.13	19.47	2.29	0.00	100.82
T664	82	94BCW310	till	0.25-0.5	green	diopside	53.26	0.04	1.19	0.37	4.36	0.12	16.71	23.30	0.67	0.00	100.02
T705	17	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.10	0.03	19.99	4.99	7.52	0.43	21.12	5.24	0.02	0.01	100.44
T705	18	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.14	0.11	18.37	6.48	7.31	0.41	20.39	5.68	0.02	0.01	99.92
T705	19	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	17.42	8.31	7.92	0.53	19.26	6.59	0.00	0.00	101.22
T705	20	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.00	0.10	17.46	7.94	7.69	0.41	19.93	6.31	0.00	0.00	100.83
T705	21	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.97	0.08	16.58	9.12	7.53	0.55	18.89	6.78	0.00	0.00	100.49
T705	22	94BCW310	till	0.5-0.84	purple	Cr-pyrope	42.44	0.60	16.99	7.83	7.67	0.35	20.22	6.12	0.02	0.02	102.25
T705	23	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.30	0.38	17.65	7.31	7.46	0.43	20.28	5.72	0.03	0.00	100.54
T705	24	94BCW310	till	0.5-0.84	purple	Cr-pyrope	42.14	0.04	20.38	4.99	7.08	0.44	23.42	2.58	0.00	0.01	101.07
T705	25	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.99	0.03	19.24	5.06	9.45	0.56	19.28	5.61	0.01	0.00	100.24
T705	26	94BCW310	till	0.5-0.84	green	Cr-diopside	54.64	0.22	1.64	1.38	2.58	0.12	17.24	20.85	1.37	0.06	100.10
T705	27	94BCW310	till	0.5-0.84	green	Cr-diopside	54.11	0.31	1.35	1.09	2.68	0.11	17.57	20.97	1.16	0.08	99.42
T705	28	94BCW310	till	0.5-0.84	green	Cr-diopside	55.49	0.26	1.05	1.20	2.42	0.09	17.38	21.85	1.06	0.04	100.83
T705	29	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.96	0.12	1.37	2.52	2.33	0.13	16.60	20.29	1.73	0.03	100.07
T705	30	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.54	0.11	1.43	2.72	2.42	0.11	16.82	19.81	1.87	0.06	99.90
T705	31	94BCW310	till	0.5-0.84	green	Cr-diopside	54.09	0.18	2.43	0.93	3.18	0.07	16.76	19.33	1.98	0.00	98.95
T705	32	94BCW310	till	0.5-0.84	green	Cr-diopside	53.69	0.07	1.47	1.04	2.91	0.17	18.40	20.22	1.17	0.05	99.18
T705	33	94BCW310	till	0.5-0.84	green	HiCr-diopsid	53.65	0.11	0.54	1.53	2.62	0.14	17.44	23.41	0.65	0.01	100.10
T705	34	94BCW310	till	0.5-0.84	green	Cr-diopside	55.84	0.15	1.35	1.16	2.71	0.11	18.11	20.59	1.15	0.05	101.22
T705	35	94BCW310	till	0.5-0.84	green	Cr-diopside	54.11	0.03	0.90	0.54	3.50	0.13	17.99	21.59	0.76	0.03	99.58
T705	36	94BCW310	till	0.5-0.84	green	Cr-diopside	55.28	0.13	0.88	1.32	2.38	0.09	17.39	22.14	1.05	0.04	100.68
T705	37	94BCW310	till	0.5-0.84	green	Cr-diopside	54.00	0.04	1.56	1.15	2.82	0.13	18.35	20.27	1.28	0.04	99.66
T705	38	94BCW310	till	0.5-0.84	pl green	olivine	39.80	0.00	0.03	0.04	8.97	0.13	50.67	0.05	0.00	0.00	99.70
T705	39	94BCW310	till	0.5-0.84	pl green	olivine	40.61	0.00	0.01	0.08	8.16	0.11	50.97	0.06	0.00	0.01	100.01
T705	40	94BCW310	till	0.5-0.84	pl green	olivine	40.25	0.05	0.04	0.08	8.43	0.13	51.12	0.04	0.00	0.01	100.14
T664	83	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.30	0.07	17.16	9.01	7.27	0.43	19.36	7.26	0.01	0.01	101.86
T664	84	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.80	0.07	19.82	5.82	7.16	0.36	21.37	5.40	0.01	0.00	101.81
T664	85	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.52	0.02	19.26	7.01	6.98	0.48	20.94	5.17	0.00	0.00	101.38
T664	86	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.14	0.17	18.39	7.17	6.90	0.37	20.69	5.88	0.01	0.00	100.73
T664	87	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.81	0.24	19.26	5.78	7.44	0.41	21.01	5.00	0.03	0.00	99.98
T664	88	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.00	0.13	18.88	6.21	7.37	0.42	20.34	5.53	0.00	0.02	98.88
T664	89	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.46	0.02	19.21	5.95	7.05	0.39	20.36	5.52	0.00	0.00	98.96
T664	90	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.75	0.04	18.74	5.41	7.01	0.44	19.86	5.32	0.00	0.01	97.57
T664	91	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.02	0.01	17.87	8.16	7.39	0.44	19.37	6.60	0.00	0.00	100.86
T664	92	94BCW310	till	0.25-0.5	purple	Cr-pyrope	40.79	0.28	17.17	8.04	7.36	0.40	19.62	6.65	0.00	0.01	100.32
T664	93	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.30	0.02	18.79	7.40	7.39	0.47	20.85	4.65	0.00	0.00	100.87
T664	94	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.73	0.02	18.97	6.94	6.88	0.52	21.37	4.53	0.03	0.01	100.99
T664	95	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.22	0.02	19.64	6.28	7.83	0.47	19.35	6.49	0.00	0.00	101.30
T664	96	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.91	0.31	20.45	4.13	8.12	0.39	20.45	5.98	0.02	0.00	101.76
T664	97	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.50	0.57	19.22	5.25	7.98	0.47	19.19	7.32	0.04	0.00	101.54
T664	98	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.68	0.32	18.59	6.74	7.27	0.35	20.57	6.17	0.02	0.02	101.71
T664	99	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.28	0.04	18.36	7.57	7.55	0.50	20.40	5.51	0.02	0.00	101.25
T664	100	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.22	0.02	17.22	9.25	7.04	0.40	20.43	6.15	0.00	0.01	101.72
T664	101	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.84	0.37	19.87	4.68	8.20	0.46	19.78	6.32	0.01	0.01	101.53
T664	102	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.68	0.56	19.77	4.49	8.49	0.43	19.66	6.38	0.04	0.00	101.49
T664	103	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.40	0.41	17.83	8.04	7.11	0.37	20.35	6.15	0.03	0.00	101.70
T664	104	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.34	0.05	16.54	10.33	6.40	0.46	21.14	5.11	0.00	0.00	101.36
T664	105	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.21	0.03	17.65	8.77	7.09	0.44	20.86	5.19	0.01	0.00	101.25
T664	106	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.56	0.22	18.02	7.83	7.16	0.41	20.55	6.20	0.03	0.00	101.98
T664	107	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.89	0.17	19.97	5.22	7.47	0.37	21.31	5.19	0.04	0.02	101.64

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T664	108	94BCW310	till	0.25-0.5	black	tourmaline	36.49	0.19	33.92	0.00	12.29	0.16	2.82	0.10	1.99	0.06	88.03
T664	109	94BCW310	till	0.25-0.5	green	Cr-diopside	54.12	0.14	1.33	1.16	2.65	0.08	18.12	21.25	1.17	0.06	100.06
T664	110	94BCW310	till	0.25-0.5	green	Cr-diopside	54.27	0.25	1.63	1.41	2.17	0.08	17.67	21.24	1.48	0.06	100.25
T664	111	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.64	0.08	1.31	2.58	2.26	0.12	16.36	21.00	1.96	0.02	99.33
T664	112	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.76	0.24	1.77	1.91	2.79	0.14	16.74	20.05	2.02	0.03	99.45
T664	113	94BCW310	till	0.25-0.5	green	Cr-diopside	54.44	0.14	1.98	0.51	3.00	0.14	18.51	19.66	1.45	0.05	99.88
T664	114	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.75	0.22	1.67	1.77	2.48	0.10	17.32	20.83	1.70	0.04	99.87
T664	115	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.11	0.26	1.52	2.47	2.43	0.07	16.96	20.33	2.10	0.04	100.27
T664	116	94BCW310	till	0.25-0.5	green	Cr-diopside	54.02	0.14	1.53	1.22	2.65	0.14	17.94	20.95	1.33	0.04	99.96
T664	117	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.72	0.24	1.38	1.78	2.42	0.12	17.08	21.06	1.72	0.04	99.56
T664	118	94BCW310	till	0.25-0.5	green	Cr-diopside	54.03	0.16	1.67	1.36	2.58	0.12	17.66	20.76	1.52	0.05	99.91
T664	119	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.84	0.20	1.73	1.51	2.55	0.10	17.82	20.44	1.65	0.06	99.91
T664	120	94BCW310	till	0.25-0.5	green	Cr-diopside	54.01	0.13	1.41	1.21	2.61	0.04	18.14	21.34	1.28	0.05	100.23
T664	121	94BCW310	till	0.25-0.5	green	Cr-diopside	54.02	0.10	1.31	1.08	2.67	0.14	18.34	21.36	1.14	0.05	100.20
T664	122	94BCW310	till	0.25-0.5	green	Cr-diopside	54.47	0.12	1.44	1.13	2.64	0.14	18.24	21.35	1.15	0.07	100.76
T664	123	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.19	0.07	1.33	1.60	2.63	0.06	18.30	20.53	1.32	0.07	100.10
T664	124	94BCW310	till	0.25-0.5	green	Cr-diopside	55.11	0.17	1.67	1.25	2.61	0.08	18.26	20.84	1.50	0.05	101.54
T664	125	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.70	0.19	1.33	1.59	2.47	0.07	17.31	21.58	1.44	0.07	99.73
T664	126	94BCW310	till	0.25-0.5	green	Cr-diopside	54.65	0.08	1.30	1.09	2.56	0.15	18.55	21.18	1.17	0.08	100.80
T664	127	94BCW310	till	0.25-0.5	green	Cr-diopside	54.27	0.13	1.57	1.28	2.49	0.05	18.68	20.77	1.46	0.05	100.75
T664	128	94BCW310	till	0.25-0.5	green	*missed grain*	0.01	0.00	0.01	0.02	0.00	0.01	0.00	0.01	0.00	0.01	0.07
T664	129	94BCW310	till	0.25-0.5	green	Cr-diopside	54.52	0.12	1.37	1.04	2.49	0.15	18.47	21.41	1.23	0.06	100.84
T664	130	94BCW310	till	0.25-0.5	green	Cr-diopside	54.59	0.21	1.33	1.00	2.73	0.09	17.93	21.49	1.37	0.04	100.78
T664	131	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.04	0.05	2.24	1.75	2.43	0.08	17.50	19.32	2.24	0.05	99.71
T664	132	94BCW310	till	0.25-0.5	green	Cr-diopside	54.49	0.12	1.34	1.19	2.69	0.09	17.90	21.67	1.19	0.05	100.71
T664	133	94BCW310	till	0.25-0.5	green	Cr-diopside	53.91	0.11	1.37	1.26	2.56	0.12	17.93	21.64	1.23	0.05	100.16
T664	134	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.26	0.26	1.26	2.01	2.43	0.12	17.04	21.29	1.75	0.01	100.42
T664	135	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.81	0.24	1.22	1.90	2.42	0.09	17.50	21.26	1.71	0.04	101.18
T664	136	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.67	0.15	1.29	1.56	2.37	0.14	17.38	21.84	1.29	0.06	99.77
T664	137	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.61	0.19	1.82	1.65	2.51	0.17	17.23	20.56	1.87	0.03	99.63
T664	138	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.24	0.18	0.85	1.77	2.25	0.08	16.83	22.45	1.23	0.03	98.90
T664	139	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.00	0.21	1.56	1.62	2.55	0.08	17.24	20.94	1.85	0.03	100.07
T664	140	94BCW310	till	0.25-0.5	green	Cr-diopside	53.85	0.08	1.49	1.01	2.77	0.08	17.89	21.22	1.28	0.07	99.73
T664	141	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.54	0.20	1.58	1.66	2.35	0.11	17.38	20.91	1.64	0.04	99.41
T664	142	94BCW310	till	0.25-0.5	green	Cr-diopside	53.33	0.17	1.65	1.30	2.63	0.08	17.42	21.07	1.49	0.05	99.18
T664	143	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.61	0.21	1.28	1.99	2.36	0.08	16.97	21.17	1.74	0.04	99.44
T664	144	94BCW310	till	0.25-0.5	green	Cr-diopside	53.47	0.10	1.50	1.20	2.67	0.14	17.98	21.22	1.36	0.06	99.69
T664	145	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.82	0.19	1.67	1.79	2.53	0.09	17.67	20.80	1.70	0.08	100.34
T664	146	94BCW310	till	0.25-0.5	green	Cr-diopside	53.79	0.16	1.67	1.26	2.66	0.10	17.68	20.85	1.49	0.04	99.70
T664	147	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.39	0.20	1.29	2.45	2.29	0.09	16.61	21.13	1.78	0.07	99.29
T664	148	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.90	0.18	1.56	3.33	2.29	0.08	16.78	19.22	2.48	0.08	99.90
T664	149	94BCW310	till	0.25-0.5	green	Cr-diopside	54.47	0.17	1.68	1.39	2.55	0.10	17.76	20.75	1.57	0.04	100.46
T664	150	94BCW310	till	0.25-0.5	green	HiCr-diopsid	53.91	0.19	0.69	2.37	2.34	0.10	17.61	21.30	1.72	0.05	100.27
T664	151	94BCW310	till	0.25-0.5	green	Cr-diopside	55.18	0.15	1.31	0.96	2.65	0.07	18.97	21.30	1.17	0.06	101.84
T664	152	94BCW310	till	0.25-0.5	green	Cr-diopside	53.62	0.18	1.64	1.27	2.68	0.10	17.63	20.98	1.57	0.05	99.71
T664	153	94BCW310	till	0.25-0.5	green	Cr-diopside	53.94	0.11	1.60	1.18	2.68	0.15	18.21	20.76	1.41	0.05	100.09
T664	154	94BCW310	till	0.25-0.5	green	Cr-diopside	53.90	0.20	1.70	1.35	2.58	0.14	17.80	21.10	1.60	0.06	100.42
T664	155	94BCW310	till	0.25-0.5	green	HiCr-diopsid	54.55	0.16	1.19	3.06	2.08	0.06	16.70	21.74	1.90	0.05	101.46
T664	156	94BCW310	till	0.25-0.5	green	Cr-diopside	53.87	0.18	1.74	1.24	2.51	0.14	17.78	21.26	1.56	0.03	100.32
T664	157	94BCW310	till	0.25-0.5	green	Cr-diopside	53.76	0.13	1.57	1.19	2.57	0.09	18.13	20.74	1.49	0.06	99.72
T664	158	94BCW310	till	0.25-0.5		*mixture*	22.55	1.31	1.46	30.84	15.22	0.34	13.54	8.30	0.82	0.02	94.41
T705	41	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.98	0.20	17.77	7.44	7.27	0.43	20.74	5.67	0.02	0.01	101.51

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T705	42	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.75	0.27	19.24	5.41	7.55	0.37	21.24	5.13	0.00	0.00	100.96
T705	43	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.30	0.27	17.39	8.21	6.81	0.39	20.31	5.85	0.01	0.01	100.54
T705	44	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.81	0.01	18.76	6.70	7.07	0.43	21.56	4.68	0.00	0.01	101.03
T705	45	94BCW310	till	0.5-0.84	purple	Cr-pyrope	42.18	0.03	19.82	5.48	7.73	0.52	21.41	3.96	0.00	0.00	101.14
T705	46	94BCW310	till	0.5-0.84	purple	Cr-pyrope	40.57	0.36	17.78	4.67	8.48	0.47	18.16	6.61	0.03	0.00	97.14
T705	47	94BCW310	till	0.5-0.84	orange	almandine	37.25	0.07	21.31	0.03	32.13	0.85	7.26	1.10	0.00	0.01	100.01
T705	48	94BCW310	till	0.5-0.84	orange	almandine	38.50	0.06	20.74	0.04	29.17	0.45	2.88	9.50	0.00	0.00	101.33
T705	49	94BCW310	till	0.5-0.84	orange	staurolite	26.38	0.52	54.10	0.06	13.05	0.50	1.63	0.01	0.13	0.00	96.38
T705	50	94BCW310	till	0.5-0.84	orange	almandine	37.91	0.04	20.68	0.06	26.88	2.35	2.03	10.54	0.00	0.01	100.50
T705	51	94BCW310	till	0.5-0.84	orange	almandine	37.30	0.00	21.01	0.05	28.05	1.27	2.89	9.48	0.01	0.00	100.06
T705	52	94BCW310	till	0.5-0.84	green	Cr-diopside	53.78	0.24	1.59	1.30	2.60	0.14	17.95	20.57	1.33	0.05	99.52
T705	53	94BCW310	till	0.5-0.84	green	Cr-diopside	54.40	0.24	1.80	0.55	3.54	0.08	17.73	19.99	1.50	0.02	99.85
T705	54	94BCW310	till	0.5-0.84	green	HiCr-diopsid	54.14	0.22	1.57	3.10	2.42	0.12	16.92	18.96	2.16	0.06	99.66
T705	55	94BCW310	till	0.5-0.84	green	Cr-diopside	52.91	0.03	1.22	1.13	2.74	0.15	18.69	20.66	1.00	0.08	98.60
T705	56	94BCW310	till	0.5-0.84	green	Cr-diopside	54.60	0.22	1.42	1.05	2.94	0.11	17.39	21.39	1.20	0.06	100.39
T705	57	94BCW310	till	0.5-0.84	green	Cr-diopside	54.57	0.14	1.50	1.08	2.70	0.12	18.18	21.16	1.11	0.08	100.62
T705	58	94BCW310	till	0.5-0.84	green	Cr-diopside	54.21	0.07	1.52	1.31	2.81	0.13	18.37	19.41	1.30	0.04	99.16
T705	59	94BCW310	till	0.5-0.84	green	Cr-diopside	54.33	0.09	1.30	1.08	2.67	0.08	18.06	21.31	1.08	0.06	100.05
T705	60	94BCW310	till	0.5-0.84	green	Cr-diopside	54.52	0.06	0.36	1.44	1.82	0.08	17.71	23.11	0.86	0.02	99.98
T705	61	94BCW310	till	0.5-0.84	green	HiCr-diopsid	55.03	0.27	1.34	2.19	2.41	0.10	16.77	20.17	1.73	0.04	100.05
T705	62	94BCW310	till	0.5-0.84	green	Cr-diopside	54.49	0.25	1.55	1.28	2.83	0.11	18.15	20.13	1.30	0.05	100.13
T705	63	94BCW310	till	0.5-0.84	green	Cr-diopside	54.57	0.08	0.65	1.06	2.78	0.11	17.59	22.64	0.87	0.01	100.35
T705	64	94BCW310	till	0.5-0.84	pl green	olivine	40.17	0.00	0.03	0.07	8.62	0.12	50.99	0.06	0.00	0.01	100.07
T705	65	94BCW310	till	0.5-0.84	pl green	olivine	40.27	0.07	0.03	0.04	8.73	0.14	51.38	0.05	0.00	0.01	100.72
T665	1	94BCW310	till	0.25-0.5	green	Diopside	53.59	0.08	1.50	0.38	4.39	0.28	17.17	22.96	0.34	0.01	100.69
T665	2	94BCW310	till	0.25-0.5	purple	Cr-pyrope	41.77	0.02	18.29	7.82	7.38	0.47	20.85	4.81	0.02	0.01	101.44
T665	3	94BCW310	till	0.25-0.5	green	Cr-diopside	54.01	0.07	1.59	0.79	6.65	0.37	17.65	19.17	0.55	0.01	100.85
T665	4	94BCW310	till	0.25-0.5	green	Cr-diopside	53.11	0.10	1.99	0.66	4.60	0.18	16.42	22.80	0.42	0.00	100.28
T665	5	94BCW310	till	0.25-0.5	green	Cr-diopside	54.67	0.12	1.45	1.14	2.54	0.12	18.19	21.07	1.09	0.08	100.46
T665	6	94BCW310	till	0.25-0.5	green	Cr-diopside	54.74	0.05	1.06	1.18	3.07	0.11	18.51	20.75	0.85	0.04	100.36
T665	7	94BCW310	till	0.25-0.5	green	Cr-diopside	54.50	0.19	1.70	1.20	2.43	0.10	17.40	21.28	1.28	0.01	100.09
T705	66	94BCW310	till	0.5-0.84	purple	Cr-pyrope	41.94	0.17	20.38	3.96	7.37	0.39	21.74	4.90	0.01	0.01	100.87
T705	67	94BCW310	till	0.5-0.84	green	Cr-diopside	53.74	0.11	1.42	0.87	3.27	0.16	17.19	21.12	1.20	0.02	99.09
T705	68	94BCW310	till	0.5-0.84	pl green	olivine	40.28	0.01	0.02	0.04	9.47	0.09	50.06	0.06	0.01	0.00	100.05
T665	8	94BCW310	till	0.25-0.5	black	Ilmenite	0.00	51.92	0.06	0.01	47.14	0.64	0.21	0.01	0.00	0.00	100.00
T665	9	94BCW310	till	0.25-0.5	black	Ilmenite	0.02	49.95	0.08	0.02	48.48	0.86	0.38	0.02	0.01	0.01	99.81
T665	10	94BCW310	till	0.25-0.5	black	Ilmenite	0.00	46.20	0.06	0.00	50.00	1.30	0.83	0.04	0.00	0.00	98.44
T665	11	94BCW310	till	0.25-0.5	green	Cr-diopside	53.36	0.17	1.69	0.71	4.05	0.09	16.39	23.67	0.35	0.01	100.49
T665	12	94BCW311	till	0.25-0.5	black	Ilmenite	0.07	52.92	0.05	0.03	45.35	1.59	0.28	0.00	0.00	0.00	100.29
T665	13	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	52.27	0.06	0.00	46.94	0.35	0.13	0.05	0.00	0.02	99.82
T665	14	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	52.40	0.02	0.04	46.38	0.18	0.63	0.04	0.00	0.00	99.68
T665	15	94BCW311	till	0.25-0.5	green	Cr-diopside	53.56	0.14	1.83	0.88	5.66	0.36	16.65	21.34	0.52	0.01	100.94
T705	69	94BCW311	till	0.5-0.84	pl green	enstatite	57.97	0.13	0.30	0.35	4.35	0.15	36.68	0.34	0.10	0.00	100.37
T665	16	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	52.43	0.03	0.00	46.55	0.30	0.54	0.00	0.00	0.00	99.86
T665	17	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	43.65	0.16	0.02	50.99	1.47	0.79	0.04	0.00	0.00	97.11
T665	18	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	47.95	0.03	0.02	48.90	2.20	0.43	0.03	0.00	0.00	99.56
T665	19	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	46.34	0.03	0.03	49.53	1.43	0.49	0.00	0.01	0.00	97.85
T665	20	94BCW311	till	0.25-0.5	black	Ilmenite	0.00	47.03	0.04	0.01	50.31	0.55	1.04	0.00	0.00	0.00	98.98
T665	21	94BCW311	till	0.25-0.5	orange	almandine	36.85	0.01	20.95	0.00	37.71	3.20	1.76	0.60	0.00	0.00	101.08
T665	22	94BCW311	till	0.25-0.5	orange	almandine	38.51	0.14	21.14	0.01	27.64	0.58	3.85	9.86	0.01	0.01	101.74
T665	23	94BCW311	till	0.25-0.5	orange	almandine	38.35	0.08	21.33	0.00	23.81	1.11	2.51	13.63	0.00	0.00	100.82
T665	24	94BCW311	till	0.25-0.5	grey	Hematite	0.21	0.05	0.01	0.48	89.95	0.07	0.00	0.01	0.00	0.00	90.78

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	25	94BCW311	till	0.25-0.5	grey	Hematite	0.43	0.08	0.10	0.27	88.06	0.06	0.03	0.03	0.00	0.00	89.04
T665	26	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.19	0.01	18.81	7.18	7.51	0.54	23.26	1.84	0.00	0.00	101.34
T665	27	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.14	0.19	18.85	6.28	7.38	0.37	20.74	5.88	0.03	0.00	101.86
T665	28	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.78	0.21	17.49	7.32	10.31	0.53	17.79	6.71	0.05	0.00	101.20
T665	29	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.54	0.42	19.38	5.20	7.11	0.38	21.44	5.46	0.01	0.00	101.94
T665	30	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.72	0.23	19.80	5.16	7.38	0.40	21.32	5.16	0.04	0.00	101.19
T665	31	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.32	0.33	17.58	7.47	7.89	0.34	20.38	6.11	0.04	0.02	102.49
T665	32	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.94	0.39	17.87	7.46	7.14	0.38	20.65	5.96	0.00	0.00	101.79
T665	33	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.04	0.32	18.16	6.67	9.19	0.29	18.05	6.95	0.04	0.02	100.73
T665	34	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.34	0.38	20.03	4.02	7.99	0.40	20.95	5.33	0.00	0.00	101.44
T665	35	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.72	0.40	18.77	6.03	8.00	0.50	20.73	5.32	0.04	0.01	101.50
T665	36	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.06	0.23	19.60	5.03	7.59	0.37	20.93	5.46	0.05	0.00	101.31
T665	37	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.81	0.15	19.32	5.97	6.95	0.38	21.55	5.21	0.02	0.00	101.36
T665	38	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.23	0.30	19.95	4.62	7.54	0.33	21.21	5.31	0.01	0.01	101.52
T665	39	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.99	0.17	19.75	5.67	7.14	0.40	21.62	5.06	0.00	0.00	102.80
T665	40	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.10	0.34	19.02	5.30	8.41	0.35	19.27	6.28	0.00	0.00	101.07
T665	41	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.36	0.26	17.43	7.96	7.00	0.39	20.27	5.80	0.01	0.00	100.47
T665	42	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.48	0.54	19.88	4.81	8.01	0.53	20.35	5.57	0.05	0.01	102.24
T665	43	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.41	0.35	19.22	4.76	8.64	0.45	18.95	6.85	0.03	0.02	100.67
T665	44	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.45	0.67	17.99	6.18	7.75	0.37	20.28	5.63	0.07	0.00	101.39
T665	45	94BCW312	till	0.25-0.5	pink	Pyrope	42.80	0.19	22.64	1.84	7.90	0.46	21.74	4.68	0.04	0.00	102.30
T665	46	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.73	0.33	19.67	5.50	8.25	0.40	19.81	6.25	0.01	0.00	102.96
T665	47	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.91	0.42	20.46	4.32	7.64	0.43	21.20	5.53	0.01	0.03	102.95
T665	48	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.60	0.23	18.84	5.93	8.13	0.45	20.12	5.24	0.00	0.00	100.53
T665	49	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.71	0.32	18.29	6.50	7.71	0.34	19.90	6.33	0.04	0.01	101.13
T665	50	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.73	0.43	20.93	3.38	8.35	0.33	20.60	5.70	0.04	0.01	102.50
T665	51	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.16	0.26	19.51	5.30	7.20	0.42	21.25	5.46	0.00	0.00	101.56
T665	52	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.82	0.15	17.81	8.03	7.26	0.43	19.79	6.51	0.02	0.01	101.82
T665	53	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.99	0.11	17.40	8.06	6.88	0.42	20.09	6.47	0.01	0.00	101.43
T665	54	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.47	0.04	17.96	8.58	6.53	0.40	21.69	4.58	0.04	0.00	102.29
T665	55	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.03	0.05	17.49	7.64	7.00	0.45	20.56	5.15	0.01	0.00	99.37
T665	56	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.11	0.07	19.65	5.76	8.54	0.59	19.57	5.51	0.01	0.00	101.81
T665	57	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	18.50	6.47	7.23	0.40	20.29	5.71	0.09	0.01	100.54
T665	58	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.13	0.59	14.61	10.26	7.97	0.36	18.52	7.25	0.01	0.01	99.72
T665	59	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.42	0.32	19.30	5.14	7.68	0.36	20.79	5.59	0.02	0.01	100.62
T665	60	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.85	0.20	19.70	5.27	7.56	0.44	21.03	5.10	0.06	0.01	101.22
T665	61	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.13	0.42	17.65	7.18	7.45	0.43	20.27	5.80	0.05	0.01	100.39
T665	62	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.64	0.27	16.72	8.62	7.27	0.41	19.98	6.35	0.03	0.00	101.29
T665	63	94BCW312	till	0.25-0.5	purple	Cr-pyrope	43.14	0.29	18.73	6.75	7.57	0.39	21.22	5.92	0.05	0.00	104.06
T665	64	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.92	0.42	17.93	7.41	7.06	0.40	20.50	5.74	0.07	0.00	101.43
T665	65	94BCW312	till	0.25-0.5	purple	*plucked*											
T665	66	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.59	0.02	20.14	5.72	7.45	0.48	22.43	3.55	0.02	0.00	102.38
T665	67	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.60	0.37	17.76	7.34	7.22	0.41	20.46	5.91	0.04	0.00	101.11
T665	68	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.67	0.49	18.72	6.73	7.70	0.48	20.70	5.53	0.09	0.02	103.13
T665	69	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.77	0.37	19.46	4.56	8.55	0.43	18.78	7.19	0.00	0.01	101.10
T665	70	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.48	0.38	19.45	5.05	7.70	0.35	20.95	5.66	0.02	0.00	101.05
T665	71	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.57	0.51	16.01	9.48	7.41	0.37	19.76	6.71	0.01	0.01	101.84
T665	72	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.66	0.04	18.22	7.39	7.52	0.47	21.09	4.62	0.00	0.00	101.00
T665	73	94BCW312	till	0.25-0.5	purple	??	2.12	0.10	0.00	0.00	0.12	0.05	0.00	0.90	0.00	0.00	3.28
T665	74	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.99	0.25	15.89	9.98	7.38	0.44	19.36	6.39	0.02	0.02	100.72
T665	75	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.26	0.70	15.36	9.97	7.73	0.41	18.76	7.51	0.03	0.00	101.73
T665	76	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.37	0.23	19.18	5.54	7.70	0.38	20.61	5.71	0.01	0.00	101.73

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	77	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.93	0.42	19.02	5.79	6.94	0.33	21.06	5.55	0.04	0.00	101.08
T665	78	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.92	0.08	18.30	7.73	7.54	0.57	22.18	2.99	0.00	0.01	101.31
T665	79	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.98	0.43	19.13	5.24	8.17	0.39	20.22	5.71	0.02	0.02	101.31
T665	80	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.83	0.40	17.45	6.81	7.19	0.36	20.06	5.81	0.03	0.01	98.96
T665	81	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.55	0.22	18.89	6.28	7.26	0.42	21.09	5.39	0.05	0.01	101.16
T665	82	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.72	0.23	21.09	3.40	7.59	0.37	21.45	4.67	0.06	0.03	101.57
T665	83	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.46	0.27	18.40	6.40	7.35	0.36	20.69	5.38	0.05	0.00	100.36
T665	84	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.32	0.25	19.92	4.67	7.66	0.35	20.56	5.26	0.05	0.03	101.05
T665	85	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.46	0.27	20.19	5.01	7.01	0.39	21.69	5.12	0.07	0.01	102.20
T665	86	94BCW312	till	0.25-0.5	purple	Cr-pyrope	42.63	0.24	19.21	6.12	7.25	0.32	21.28	5.10	0.03	0.00	102.17
T665	87	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.98	0.26	20.00	4.70	7.31	0.34	21.57	4.98	0.03	0.01	101.19
T665	88	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.15	0.50	18.88	5.82	7.49	0.42	20.42	5.57	0.06	0.00	100.31
T665	89	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.10	0.65	17.50	7.02	7.84	0.42	18.44	7.89	0.05	0.00	100.90
T665	90	94BCW312	till	0.25-0.5	orange	*plucked*											
T665	91	94BCW312	till	0.25-0.5	orange	almandine	37.27	0.12	20.67	0.00	27.31	4.07	1.70	9.07	0.02	0.00	100.23
T665	92	94BCW312	till	0.25-0.5	orange	almandine	37.97	0.16	21.08	0.01	29.10	1.93	3.56	7.18	0.00	0.01	101.00
T665	93	94BCW312	till	0.25-0.5	green	Cr-diopside	54.56	0.16	1.60	1.49	2.54	0.09	17.35	21.03	1.39	0.06	100.25
T665	94	94BCW312	till	0.25-0.5	green	Cr-diopside	54.76	0.23	1.67	1.28	2.44	0.09	17.64	21.06	1.30	0.03	100.50
T665	95	94BCW312	till	0.25-0.5	green	Cr-diopside	54.89	0.09	1.29	1.09	2.71	0.10	18.25	21.15	1.03	0.07	100.66
T665	96	94BCW312	till	0.25-0.5	green	Cr-diopside	54.91	0.11	1.35	1.17	2.70	0.04	18.22	21.26	1.09	0.05	100.91
T665	97	94BCW312	till	0.25-0.5	green	Cr-diopside	54.81	0.12	1.45	1.08	2.65	0.12	18.32	21.13	1.07	0.07	100.79
T665	98	94BCW312	till	0.25-0.5	green	Cr-diopside	54.45	0.14	1.37	1.05	2.54	0.08	18.00	21.34	1.01	0.05	100.02
T665	99	94BCW312	till	0.25-0.5	green	Cr-diopside	54.62	0.25	1.31	1.49	2.55	0.09	17.65	21.09	1.39	0.02	100.48
T665	100	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.52	0.17	1.63	1.74	2.43	0.09	17.26	20.97	1.43	0.04	100.27
T665	101	94BCW312	till	0.25-0.5	green	Cr-diopside	54.94	0.09	1.33	1.06	2.62	0.10	18.27	21.59	1.01	0.05	101.06
T665	102	94BCW312	till	0.25-0.5	green	Cr-diopside	54.98	0.12	1.61	1.23	2.74	0.09	17.99	20.46	1.22	0.07	100.50
T665	103	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.01	0.11	2.13	1.69	2.18	0.10	17.43	19.81	1.87	0.00	100.32
T665	104	94BCW312	till	0.25-0.5	green	Cr-diopside	54.90	0.15	1.46	1.02	2.64	0.05	18.23	21.15	1.08	0.07	100.75
T665	105	94BCW312	till	0.25-0.5	green	Cr-diopside	54.43	0.10	1.29	1.16	2.60	0.15	17.85	21.51	0.94	0.06	100.07
T665	106	94BCW312	till	0.25-0.5	green	Cr-diopside	54.78	0.16	1.67	1.44	2.56	0.09	17.78	20.47	1.38	0.07	100.38
T665	107	94BCW312	till	0.25-0.5	green	HiCr-diopsid	52.45	0.19	1.33	1.66	3.03	0.08	16.66	20.35	0.90	0.05	96.71
T665	108	94BCW312	till	0.25-0.5	green	Cr-diopside	54.96	0.19	1.72	1.33	2.59	0.12	17.68	20.68	1.36	0.06	100.69
T665	109	94BCW312	till	0.25-0.5	green	Cr-diopside	54.97	0.09	1.42	1.22	2.62	0.10	18.19	21.20	1.11	0.02	100.93
T665	110	94BCW312	till	0.25-0.5	green	Cr-diopside	55.22	0.26	1.38	0.86	2.75	0.07	17.77	21.73	1.12	0.07	101.22
T665	111	94BCW312	till	0.25-0.5	green	Cr-diopside	54.71	0.14	1.68	1.27	2.55	0.12	17.83	21.01	1.32	0.07	100.68
T665	112	94BCW312	till	0.25-0.5	green	Cr-diopside	54.92	0.15	1.41	1.26	2.63	0.14	18.00	21.09	1.23	0.05	100.88
T665	113	94BCW312	till	0.25-0.5	green	Cr-diopside	55.10	0.12	1.41	1.05	2.66	0.11	18.68	20.56	1.04	0.10	100.82
T665	114	94BCW312	till	0.25-0.5	green	Cr-diopside	54.82	0.16	1.64	1.22	2.58	0.12	17.64	21.25	1.33	0.04	100.79
T665	115	94BCW312	till	0.25-0.5	green	Cr-diopside	54.85	0.14	1.45	1.40	2.64	0.11	18.05	20.54	1.24	0.07	100.48
T665	116	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.77	0.15	1.90	3.64	2.19	0.12	16.61	18.50	2.36	0.03	100.29
T665	117	94BCW312	till	0.25-0.5	green	Cr-diopside	54.74	0.21	1.46	1.41	2.78	0.15	17.49	21.19	1.27	0.03	100.73
T665	118	94BCW312	till	0.25-0.5	green	Cr-diopside	54.91	0.17	0.66	1.33	2.32	0.03	17.54	22.76	0.97	0.03	100.72
T665	119	94BCW312	till	0.25-0.5	green	Cr-diopside	52.47	0.17	1.40	0.97	2.70	0.10	17.23	20.94	1.03	0.37	97.37
T665	120	94BCW312	till	0.25-0.5	green	Cr-diopside	54.72	0.17	1.67	1.47	2.63	0.12	17.49	20.88	1.37	0.06	100.57
T665	121	94BCW312	till	0.25-0.5	green	Cr-diopside	55.13	0.10	1.27	1.05	2.55	0.08	19.13	20.66	1.01	0.08	101.05
T665	122	94BCW312	till	0.25-0.5	green	Cr-diopside	53.98	0.30	1.89	0.55	3.00	0.10	17.53	19.86	1.35	0.07	98.64
T665	123	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.59	0.32	1.63	1.67	2.82	0.09	17.43	19.86	1.60	0.08	100.09
T665	124	94BCW312	till	0.25-0.5	green	Cr-diopside	54.33	0.04	1.30	1.41	2.67	0.10	18.32	20.87	1.06	0.06	100.14
T665	125	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.86	0.22	1.46	1.54	2.61	0.08	17.38	21.29	1.22	0.05	100.72
T665	126	94BCW312	till	0.25-0.5	green	Cr-diopside	54.80	0.22	1.36	1.37	2.47	0.07	17.47	21.51	1.10	0.07	100.46
T665	127	94BCW312	till	0.25-0.5	green	Cr-diopside	54.70	0.13	1.53	1.20	2.60	0.05	18.05	20.65	1.21	0.06	100.19
T665	128	94BCW312	till	0.25-0.5	green	Cr-diopside	54.71	0.17	1.70	1.29	2.52	0.11	17.76	20.84	1.31	0.05	100.46

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T665	129	94BCW312	till	0.25-0.5	green	Cr-diopside	54.56	0.24	1.65	1.22	2.65	0.07	17.59	21.10	1.19	0.07	100.32
T665	130	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.28	0.14	0.44	2.48	2.36	0.09	16.71	22.08	1.39	0.01	100.98
T665	131	94BCW312	till	0.25-0.5	green	Cr-diopside	53.72	0.14	1.64	1.27	2.52	0.09	17.36	20.94	1.25	0.05	98.99
T665	132	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.28	0.05	1.45	1.59	1.74	0.10	17.21	22.04	1.37	0.00	100.81
T665	133	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.75	0.08	0.85	4.58	2.18	0.09	16.22	18.75	2.49	0.04	100.01
T665	134	94BCW312	till	0.25-0.5	green	Cr-diopside	55.11	0.12	1.64	1.14	2.61	0.09	17.92	21.00	1.25	0.04	100.92
T665	135	94BCW312	till	0.25-0.5	green	Cr-diopside	54.83	0.17	1.74	1.34	2.65	0.07	17.65	20.95	1.31	0.06	100.76
T665	136	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.69	0.21	1.09	1.76	2.46	0.10	17.44	21.78	1.26	0.04	101.82
T665	137	94BCW312	till	0.25-0.5	green	Cr-diopside	54.94	0.15	1.46	1.21	2.63	0.13	17.99	21.27	1.10	0.07	100.94
T665	138	94BCW312	till	0.25-0.5	green	Cr-diopside	54.87	0.14	1.70	1.32	2.60	0.09	17.92	20.68	1.36	0.03	100.71
T665	139	94BCW312	till	0.25-0.5	green	Cr-diopside	54.66	0.20	1.67	1.37	2.53	0.08	17.55	20.90	1.30	0.05	100.30
T665	140	94BCW312	till	0.25-0.5	green	Cr-diopside	54.97	0.25	1.35	1.32	2.31	0.10	17.88	21.81	1.09	0.08	101.15
T665	141	94BCW312	till	0.25-0.5	green	Cr-diopside	54.71	0.15	1.50	1.17	2.62	0.11	18.06	21.32	1.10	0.05	100.79
T665	142	94BCW312	till	0.25-0.5	green	Cr-diopside	56.36	0.13	1.66	1.17	2.57	0.11	19.70	20.29	1.12	0.03	103.12
T665	143	94BCW312	till	0.25-0.5	green	Cr-diopside	54.72	0.14	2.12	1.37	2.47	0.13	17.15	20.05	1.70	0.00	99.85
T665	144	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.75	0.21	1.49	2.32	2.04	0.07	17.17	20.58	1.53	0.05	100.19
T665	145	94BCW312	till	0.25-0.5	green	Cr-diopside	54.78	0.14	1.61	1.31	2.61	0.08	17.98	20.70	1.16	0.06	100.43
T665	146	94BCW312	till	0.25-0.5	green	Cr-diopside	54.74	0.07	1.12	1.01	2.71	0.09	18.60	21.06	0.90	0.06	100.37
T665	147	94BCW312	till	0.25-0.5	green	Cr-diopside	54.73	0.11	1.41	1.11	2.63	0.08	18.24	21.41	1.04	0.05	100.80
T665	148	94BCW312	till	0.25-0.5	green	Cr-diopside	53.95	0.12	1.29	1.08	2.62	0.09	18.32	20.67	0.94	0.13	99.21
T665	149	94BCW312	till	0.25-0.5	green	Cr-diopside	54.95	0.12	1.34	1.07	2.51	0.10	17.97	21.57	1.05	0.05	100.73
T665	150	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.73	0.21	1.44	1.91	2.61	0.11	16.99	20.81	1.60	0.04	100.45
T666	1	94BCW312	till	0.25-0.5		*plucked*											
T666	2	94BCW312	till	0.25-0.5	green	Cr-diopside	54.56	0.14	1.48	1.21	2.54	0.09	18.41	20.96	1.30	0.07	100.76
T666	3	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.64	0.03	1.45	2.29	2.42	0.11	17.30	20.71	2.04	0.02	100.99
T666	4	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.28	0.25	1.61	1.62	2.65	0.09	18.03	20.52	1.63	0.07	100.74
T666	5	94BCW312	till	0.25-0.5	green	Cr-diopside	54.81	0.19	1.66	1.40	2.59	0.06	17.80	20.91	1.58	0.06	101.05
T666	6	94BCW312	till	0.25-0.5	green	Cr-diopside	53.83	0.19	1.71	1.25	2.60	0.12	17.99	20.91	1.48	0.05	100.11
T666	7	94BCW312	till	0.25-0.5	green	Cr-diopside	53.78	0.28	1.60	1.18	2.99	0.12	17.43	21.26	1.44	0.04	100.10
T666	8	94BCW312	till	0.25-0.5	green	Cr-diopside	54.20	0.09	1.31	1.13	2.58	0.16	18.87	21.00	1.20	0.06	100.60
T666	9	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.19	0.28	1.66	1.60	2.66	0.09	17.30	20.44	1.91	0.05	100.16
T666	10	94BCW312	till	0.25-0.5	green	Cr-diopside	53.73	0.22	1.61	1.39	2.66	0.13	17.47	21.13	1.51	0.15	100.00
T666	11	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.01	0.13	1.13	3.02	1.84	0.09	16.99	20.64	1.99	0.04	99.89
T666	12	94BCW312	till	0.25-0.5	green	Cr-diopside	52.46	0.14	1.83	1.31	2.52	0.08	17.79	19.75	2.46	0.16	98.52
T666	13	94BCW312	till	0.25-0.5	green	Cr-diopside	53.32	0.21	0.93	1.22	2.36	0.08	17.43	22.36	1.13	0.04	99.07
T666	14	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.53	0.20	1.33	2.09	2.40	0.11	17.30	21.00	1.77	0.03	100.77
T666	15	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.75	0.28	1.64	2.20	2.54	0.09	17.15	20.21	1.89	0.06	99.81
T666	16	94BCW312	till	0.25-0.5	green	Cr-diopside	45.17	0.19	1.59	1.05	2.51	0.09	16.56	19.31	0.88	0.71	88.06
T666	17	94BCW312	till	0.25-0.5	green	Cr-diopside	54.61	0.28	1.63	1.10	2.93	0.12	17.87	21.21	1.43	0.07	101.25
T666	18	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.42	0.14	2.28	1.55	2.75	0.10	17.28	19.72	2.18	0.01	100.43
T666	19	94BCW312	till	0.25-0.5	green	Cr-diopside	54.05	0.23	1.48	1.16	2.66	0.08	17.74	21.50	1.38	0.04	100.31
T666	20	94BCW312	till	0.25-0.5	green	Cr-diopside	55.41	0.10	1.33	1.05	2.64	0.12	18.32	21.49	1.22	0.07	101.75
T666	21	94BCW312	till	0.25-0.5	green	Cr-diopside	54.24	0.25	1.51	0.77	2.61	0.11	17.66	21.18	1.11	0.05	99.47
T666	22	94BCW312	till	0.25-0.5	green	Cr-diopside	53.96	0.22	1.39	1.24	2.59	0.13	17.27	22.01	1.39	0.03	100.21
T666	23	94BCW312	till	0.25-0.5	green	Cr-diopside	54.04	0.23	1.43	1.46	2.59	0.12	17.73	21.67	1.39	0.06	100.73
T666	24	94BCW312	till	0.25-0.5		*plucked*											
T666	25	94BCW312	till	0.25-0.5	green	Cr-diopside	54.25	0.12	1.53	1.25	2.55	0.08	18.01	21.39	1.33	0.06	100.58
T666	26	94BCW312	till	0.25-0.5	green	Cr-diopside	54.86	0.14	1.72	1.27	2.71	0.11	18.56	20.48	1.52	0.06	101.42
T666	27	94BCW312	till	0.25-0.5	green	Cr-diopside	54.83	0.18	1.56	1.06	2.62	0.10	18.14	20.88	1.48	0.04	100.90
T666	28	94BCW312	till	0.25-0.5		*plucked*											
T666	29	94BCW312	till	0.25-0.5	green	Cr-diopside	54.79	0.14	1.44	0.97	2.71	0.09	18.64	21.23	1.26	0.07	101.33
T666	30	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.12	0.19	1.38	2.48	2.56	0.11	16.66	21.38	1.82	0.05	100.73

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	31	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.93	0.25	1.40	1.86	2.53	0.11	16.96	20.72	1.87	0.07	99.70
T666	32	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.76	0.18	1.67	1.82	2.51	0.09	17.37	20.52	1.73	0.04	99.69
T705	70	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.66	0.01	18.80	6.39	7.84	0.47	19.15	6.05	0.01	0.01	99.39
T705	71	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.41	0.02	18.95	5.94	7.99	0.47	19.35	6.02	0.00	0.01	99.15
T705	72	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.71	0.16	19.48	4.99	8.69	0.54	18.42	6.54	0.01	0.00	100.54
T705	73	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.13	0.58	17.32	6.88	7.70	0.46	18.48	7.78	0.03	0.00	99.36
T705	74	94BCW312	till	0.5-0.84	purple	Cr-pyrope	39.57	0.31	15.26	9.67	10.68	0.64	16.92	6.90	0.01	0.00	99.96
T705	75	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.80	0.54	18.77	5.56	6.75	0.35	21.56	5.37	0.02	0.01	99.73
T705	76	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.65	0.12	20.11	4.34	7.31	0.42	21.70	4.97	0.02	0.01	100.63
T705	77	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.08	0.38	19.03	5.12	8.54	0.42	20.57	5.03	0.04	0.00	100.21
T705	78	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.51	0.36	20.85	3.23	8.24	0.38	21.31	4.28	0.06	0.00	100.22
T705	79	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.92	0.38	19.08	5.08	8.03	0.45	20.09	6.22	0.03	0.02	100.30
T705	80	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.35	0.00	17.59	8.59	7.03	0.41	22.91	2.79	0.00	0.02	100.69
T705	81	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.31	0.00	18.85	6.18	7.35	0.39	20.56	5.89	0.00	0.01	100.53
T705	82	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.04	0.37	17.82	7.25	7.29	0.41	20.62	5.62	0.04	0.00	100.45
T705	83	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.66	0.38	18.03	6.58	7.30	0.39	20.85	5.58	0.03	0.01	99.80
T705	84	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.75	0.08	20.27	4.69	7.72	0.36	21.02	4.96	0.02	0.00	100.87
T705	85	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.97	0.02	18.19	6.98	8.28	0.49	19.60	5.97	0.00	0.00	101.50
T705	86	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.22	0.32	19.44	4.46	8.54	0.41	19.13	6.47	0.02	0.00	99.99
T705	87	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.73	0.32	19.90	4.09	8.30	0.44	20.75	5.29	0.01	0.01	100.84
T705	88	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.92	0.48	17.05	8.09	6.72	0.37	20.39	5.96	0.03	0.00	100.00
T705	89	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.83	0.24	19.95	4.04	7.74	0.44	21.62	5.18	0.00	0.00	101.05
T705	90	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.65	0.00	18.61	6.56	8.22	0.55	19.16	5.78	0.00	0.01	99.54
T705	91	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.21	0.00	18.62	6.78	7.60	0.47	21.34	4.29	0.00	0.02	100.33
T705	92	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.66	0.19	19.48	5.21	7.28	0.36	21.53	4.82	0.04	0.00	100.56
T705	93	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.50	0.03	18.16	7.32	7.88	0.57	19.90	5.70	0.00	0.00	100.05
T705	94	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.69	0.43	19.60	4.40	7.78	0.51	21.10	4.77	0.05	0.00	100.32
T705	95	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	18.63	6.61	7.55	0.53	21.05	4.75	0.00	0.01	100.32
T705	96	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.26	0.02	19.51	5.70	7.79	0.52	20.83	4.55	0.01	0.00	100.18
T705	97	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.91	0.26	20.22	3.39	7.76	0.42	21.40	4.82	0.01	0.00	99.18
T705	98	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.73	0.24	18.77	5.09	8.65	0.43	19.00	6.65	0.00	0.00	99.55
T705	99	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.75	0.36	17.48	7.39	7.00	0.34	20.79	5.56	0.03	0.01	99.71
T705	100	94BCW312	till	0.5-0.84	orange	almandine	37.25	0.24	20.65	0.08	27.17	0.85	3.82	9.15	0.01	0.00	99.22
T705	101	94BCW312	till	0.5-0.84	orange	almandine	36.81	0.13	20.88	0.07	28.31	1.13	4.43	7.39	0.00	0.01	99.16
T705	102	94BCW312	till	0.5-0.84	orange	almandine	37.03	0.03	21.06	0.03	31.81	0.77	7.15	1.14	0.00	0.00	99.02
T705	103	94BCW312	till	0.5-0.84	black	Ti-chromite	0.14	4.55	4.30	51.60	30.18	0.37	9.38	0.00	0.02	0.00	100.53
T705	104	94BCW312	till	0.5-0.84	black	Mg-ilmenite	0.00	53.32	0.34	6.67	26.38	0.32	13.51	0.04	0.02	0.00	100.61
T705	105	94BCW312	till	0.5-0.84	pl green	enstatite	58.22	0.04	0.41	0.38	4.11	0.09	36.80	0.23	0.10	0.00	100.37
T705	106	94BCW312	till	0.5-0.84	pl green	enstatite	56.23	0.00	2.33	0.56	4.56	0.10	35.27	0.50	0.01	0.01	99.58
T705	107	94BCW312	till	0.5-0.84	pl green	olivine	39.66	0.01	0.03	0.06	8.73	0.09	50.21	0.06	0.00	0.01	98.85
T705	108	94BCW312	till	0.5-0.84	pl green	olivine	39.52	0.03	0.03	0.08	9.98	0.09	49.79	0.06	0.01	0.00	99.59
T706	1	94BCW312	till	0.5-0.84	green	Cr-diopside	55.15	0.16	0.95	1.45	2.45	0.05	17.54	21.88	1.12	0.05	100.81
T706	2	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.43	0.26	1.41	2.14	2.42	0.15	17.51	20.00	1.71	0.03	100.06
T706	3	94BCW312	till	0.5-0.84	green	Cr-diopside	54.14	0.23	1.66	1.31	2.90	0.15	18.19	19.87	1.49	0.07	99.99
T706	4	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.52	0.26	1.30	1.51	2.52	0.11	17.93	20.67	1.41	0.04	101.26
T706	5	94BCW312	till	0.5-0.84	green	Cr-diopside	54.73	0.22	1.74	1.33	2.50	0.10	18.03	20.59	1.37	0.06	100.68
T706	6	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.00	0.28	1.49	2.71	2.36	0.09	16.95	20.20	1.74	0.07	99.90
T706	7	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.10	0.10	2.14	2.27	2.63	0.15	16.80	19.00	2.08	0.04	100.30
T706	8	94BCW312	till	0.5-0.84	green	Cr-diopside	54.05	0.23	1.65	1.29	2.51	0.14	17.46	20.43	1.33	0.05	99.13
T706	9	94BCW312	till	0.5-0.84	green	Cr-diopside	55.50	0.17	1.47	0.86	2.56	0.08	17.86	21.21	1.26	0.03	101.00
T706	10	94BCW312	till	0.5-0.84	green	Cr-diopside	54.82	0.14	0.90	1.41	2.52	0.09	17.53	21.97	1.08	0.04	100.50
T706	11	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.44	0.31	1.79	1.64	2.80	0.05	17.34	19.95	1.68	0.02	100.00

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T706	12	94BCW312	till	0.5-0.84	green	Cr-diopside	53.39	0.14	1.47	1.19	2.60	0.16	17.87	21.45	1.15	0.07	99.49
T706	13	94BCW312	till	0.5-0.84	green	Cr-diopside	55.46	0.22	1.70	1.37	2.48	0.10	17.61	20.51	1.37	0.05	100.84
T706	14	94BCW312	till	0.5-0.84	green	Cr-diopside	53.68	0.22	1.56	1.36	2.67	0.14	17.97	20.35	1.30	0.05	99.29
T706	15	94BCW312	till	0.5-0.84	green	Cr-diopside	55.47	0.09	1.62	1.31	2.55	0.08	17.91	20.37	1.36	0.05	100.81
T706	16	94BCW312	till	0.5-0.84	green	Cr-diopside	55.06	0.13	1.68	1.47	2.49	0.13	17.52	20.91	1.43	0.06	100.87
T706	17	94BCW312	till	0.5-0.84	green	diopside	54.59	0.26	2.26	0.44	2.75	0.08	16.86	19.08	1.32	0.06	97.70
T706	18	94BCW312	till	0.5-0.84	green	Cr-diopside	53.90	0.24	1.38	0.87	3.09	0.12	17.92	20.65	1.09	0.05	99.30
T706	19	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.15	0.34	1.68	1.65	2.68	0.11	17.43	19.83	1.73	0.04	100.63
T706	20	94BCW312	till	0.5-0.84	green	Cr-diopside	54.09	0.18	1.25	1.46	2.44	0.07	17.61	21.59	1.38	0.04	100.11
T706	21	94BCW312	till	0.5-0.84	green	Cr-diopside	55.40	0.10	1.31	1.15	2.70	0.15	18.79	20.53	1.05	0.07	101.24
T706	22	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.38	0.17	1.37	1.92	2.52	0.07	16.91	20.22	1.66	0.04	99.27
T706	23	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.25	0.17	1.33	2.11	2.68	0.12	17.12	19.60	1.50	0.13	99.01
T706	24	94BCW312	till	0.5-0.84	green	Cr-diopside	54.36	0.19	1.64	1.29	2.53	0.10	18.26	20.47	1.31	0.04	100.20
T706	25	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.50	0.18	1.67	2.54	2.47	0.09	16.96	20.63	1.74	0.04	101.82
T706	26	94BCW312	till	0.5-0.84	green	Cr-diopside	54.47	0.22	1.34	1.33	2.53	0.12	18.08	21.53	1.15	0.06	100.82
T706	27	94BCW312	till	0.5-0.84	green	diopside	54.76	0.29	1.87	0.43	3.26	0.13	17.79	19.75	1.50	0.02	99.81
T706	28	94BCW312	till	0.5-0.84	green	Cr-diopside	51.42	0.10	1.38	1.08	3.01	0.12	17.42	19.50	0.83	0.11	94.95
T706	29	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.74	0.22	1.37	2.02	2.35	0.06	16.95	20.46	1.70	0.04	100.89
T706	30	94BCW312	till	0.5-0.84	green	Cr-diopside	54.26	0.08	1.43	1.26	2.69	0.11	18.59	20.74	1.15	0.05	100.36
T706	31	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.39	0.15	1.63	1.51	2.53	0.12	17.84	20.33	1.45	0.04	99.98
T706	32	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.00	0.14	1.48	1.51	2.55	0.10	17.77	20.84	1.22	0.07	99.68
T706	33	94BCW312	till	0.5-0.84	green	HiCr-diopsid	53.95	0.18	1.35	1.50	2.33	0.10	17.66	21.22	1.19	0.05	99.53
T706	34	94BCW312	till	0.5-0.84	green	Cr-diopside	54.83	0.09	1.26	0.99	2.77	0.12	19.51	19.55	0.87	0.06	100.05
T706	35	94BCW312	till	0.5-0.84	green	HiCr-diopsid	53.14	0.24	1.59	2.54	2.58	0.15	16.78	19.60	1.97	0.07	98.66
T706	36	94BCW312	till	0.5-0.84	green	Cr-diopside	54.70	0.22	1.36	0.95	2.97	0.09	18.15	20.88	1.06	0.06	100.42
T706	37	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.00	0.18	1.64	1.69	2.53	0.11	17.59	19.94	1.48	0.06	99.23
T706	38	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.85	0.20	1.39	1.60	2.46	0.10	17.15	20.51	1.51	0.04	100.79
T706	39	94BCW312	till	0.5-0.84	green	Cr-diopside	54.97	0.31	1.77	0.50	3.27	0.14	18.08	19.92	1.38	0.04	100.37
T706	40	94BCW312	till	0.5-0.84	green	Cr-diopside	54.52	0.16	1.64	1.19	2.63	0.08	17.93	20.28	1.36	0.06	99.84
T706	41	94BCW312	till	0.5-0.84	green	Cr-diopside	53.78	0.21	1.51	1.33	2.60	0.12	18.25	20.58	1.29	0.04	99.73
T706	42	94BCW312	till	0.5-0.84	green	Cr-diopside	54.14	0.18	1.33	1.46	2.37	0.14	17.58	21.75	1.28	0.05	100.28
T706	43	94BCW312	till	0.5-0.84	green	Cr-diopside	55.04	0.16	1.64	1.31	2.67	0.12	17.88	20.24	1.41	0.05	100.52
T706	44	94BCW312	till	0.5-0.84	green	Cr-diopside	53.28	0.20	1.63	1.43	2.64	0.09	17.64	20.59	1.45	0.02	98.97
T706	45	94BCW312	till	0.5-0.84	green	Cr-diopside	53.33	0.09	1.55	1.08	3.00	0.09	17.43	20.63	1.24	0.06	98.48
T706	46	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.31	0.22	2.09	1.73	2.68	0.16	17.38	19.22	1.99	0.02	100.78
T706	47	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.70	0.23	1.73	1.91	3.33	0.13	18.86	17.69	1.72	0.07	100.37
T685	48	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.94	0.22	17.79	7.06	6.52	0.35	20.70	5.61	0.00	0.00	99.18
T685	49	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.37	0.14	17.75	7.35	7.14	0.43	20.40	5.24	0.04	0.00	99.86
T685	50	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.77	0.30	18.74	5.66	7.09	0.36	20.95	5.28	0.01	0.00	99.17
T685	51	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.13	0.12	18.10	5.35	11.86	0.62	16.61	6.58	0.00	0.00	99.37
T685	52	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.22	0.39	18.88	4.89	8.48	0.41	19.12	6.67	0.02	0.00	99.06
T685	53	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.74	0.39	19.70	4.19	7.46	0.36	21.56	4.95	0.03	0.02	100.38
T685	54	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.11	0.44	17.20	7.00	8.46	0.49	18.23	7.36	0.02	0.00	99.32
T685	55	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.22	0.35	19.32	4.48	8.00	0.40	19.55	5.73	0.03	0.00	98.08
T685	56	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.58	0.11	21.39	2.29	7.85	0.35	21.32	4.23	0.02	0.00	99.14
T685	57	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.41	0.28	18.81	5.54	6.73	0.38	21.16	5.36	0.01	0.00	99.68
T685	58	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.28	0.30	16.01	8.30	10.99	0.48	16.79	6.96	0.02	0.00	99.13
T685	59	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.69	0.10	19.37	4.77	7.33	0.36	20.81	5.23	0.00	0.01	98.67
T685	60	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.59	0.24	18.75	5.98	7.39	0.41	20.88	5.06	0.01	0.00	99.28
T685	61	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.50	0.26	20.56	3.39	7.24	0.38	21.55	4.82	0.02	0.01	99.73
T685	62	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.70	0.24	18.32	6.47	7.02	0.41	20.89	5.24	0.03	0.02	99.32
T685	63	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.01	0.37	17.34	7.58	6.60	0.36	20.36	6.01	0.00	0.01	99.64

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T685	64	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.04	0.15	20.26	3.89	8.21	0.41	20.89	4.64	0.02	0.01	99.52
T685	65	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.64	0.44	18.92	5.12	8.03	0.37	19.63	6.03	0.03	0.00	99.22
T685	66	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.33	0.26	19.35	4.70	7.81	0.43	20.65	5.53	0.03	0.00	100.07
T685	67	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.13	0.31	18.05	6.34	8.26	0.38	19.88	6.24	0.01	0.01	99.61
T685	68	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.45	0.35	18.62	5.66	8.26	0.37	20.26	5.44	0.04	0.00	99.45
T685	69	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.11	0.53	18.21	6.04	7.78	0.37	19.71	6.38	0.01	0.01	99.14
T685	70	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.50	0.33	19.00	4.78	8.56	0.50	18.64	7.10	0.03	0.00	99.44
T685	71	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.39	0.08	19.88	4.31	7.83	0.43	20.62	5.08	0.00	0.00	99.62
T685	72	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.81	0.06	16.17	9.64	6.96	0.43	19.75	5.98	0.01	0.01	98.81
T685	73	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.67	0.30	18.59	5.53	8.13	0.39	19.80	6.14	0.00	0.00	99.55
T685	74	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.96	0.55	18.87	4.69	8.09	0.36	20.51	5.17	0.04	0.00	99.24
T685	75	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.23	0.50	17.18	7.25	7.62	0.43	20.03	5.84	0.03	0.01	100.12
T685	76	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.94	0.45	16.84	7.92	6.54	0.34	20.42	5.58	0.02	0.02	99.06
T685	77	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.65	0.34	20.44	3.33	7.71	0.32	21.16	4.79	0.01	0.00	98.75
T685	78	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.46	0.29	17.54	6.50	10.77	0.63	17.55	6.02	0.01	0.01	99.77
T685	79	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.81	0.24	20.49	3.70	7.52	0.41	21.37	4.67	0.02	0.00	99.22
T685	80	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.36	0.42	18.71	4.95	8.21	0.39	19.40	6.21	0.04	0.01	99.69
T685	81	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.95	0.44	18.98	4.47	8.50	0.35	20.39	5.23	0.00	0.01	99.32
T685	82	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.12	0.23	18.10	6.46	7.33	0.35	20.70	5.34	0.02	0.00	99.64
T685	83	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.06	0.56	18.71	5.20	7.77	0.47	18.75	7.18	0.03	0.00	98.72
T685	84	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.43	0.24	20.17	3.98	7.59	0.38	21.54	4.56	0.01	0.01	99.91
T685	85	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.53	0.32	19.30	4.61	8.43	0.42	18.68	6.70	0.00	0.00	98.99
T685	86	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.11	0.27	17.78	7.21	7.13	0.38	20.58	5.71	0.00	0.01	99.17
T685	87	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.62	0.35	19.60	4.38	7.78	0.44	21.14	4.79	0.03	0.00	99.13
T685	88	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.72	0.27	17.86	6.41	7.90	0.40	19.81	6.16	0.01	0.00	99.53
T685	89	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.69	0.59	17.46	6.94	7.42	0.41	20.43	5.82	0.04	0.00	99.79
T685	90	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.37	0.36	18.33	6.42	7.35	0.45	20.64	5.16	0.03	0.01	100.13
T685	91	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.96	0.46	19.22	4.40	8.02	0.43	19.13	6.67	0.02	0.00	99.30
T685	92	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.18	0.63	17.28	6.47	8.14	0.34	19.95	5.69	0.05	0.00	98.75
T685	93	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.15	0.52	18.33	5.80	7.32	0.36	20.64	5.36	0.01	0.02	98.52
T685	94	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.33	0.20	19.23	5.19	7.58	0.39	21.01	4.92	0.04	0.02	99.91
T685	95	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.57	0.36	16.67	8.01	7.15	0.40	19.78	5.85	0.04	0.00	98.82
T685	96	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.61	0.34	17.37	7.64	6.71	0.39	19.97	5.81	0.00	0.01	98.85
T685	97	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.98	0.07	16.78	8.40	7.37	0.42	20.17	5.58	0.00	0.00	98.77
T685	98	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.47	0.21	19.40	4.99	7.41	0.43	21.23	4.61	0.02	0.00	99.76
T685	99	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.45	0.18	17.36	7.69	6.94	0.35	20.23	5.67	0.03	0.02	98.92
T685	100	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.35	0.13	20.66	3.24	7.51	0.33	21.36	4.68	0.02	0.00	99.27
T685	101	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.33	0.31	20.31	3.89	7.58	0.34	21.01	4.48	0.05	0.01	99.32
T685	102	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.99	0.17	20.40	3.67	8.05	0.38	21.33	4.61	0.02	0.01	99.62
T685	103	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.46	0.24	17.62	7.35	7.32	0.42	20.00	5.76	0.00	0.00	99.17
T685	104	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.09	0.36	16.65	8.08	7.98	0.46	18.74	6.79	0.01	0.00	99.16
T685	105	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.17	0.11	17.95	6.93	7.09	0.39	20.42	5.82	0.00	0.00	98.88
T685	106	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.82	0.24	16.63	8.38	7.06	0.43	20.07	5.85	0.01	0.00	99.50
T685	107	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.38	0.18	17.22	8.03	6.83	0.35	20.11	5.90	0.00	0.02	99.01
T685	108	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.95	0.36	16.65	8.30	6.87	0.32	19.94	6.15	0.00	0.03	99.56
T685	109	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.80	0.29	18.58	6.17	6.88	0.41	21.18	5.46	0.03	0.01	99.81
T686	1	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.24	0.35	17.26	7.62	7.31	0.42	19.89	6.01	0.01	0.01	99.12
T686	2	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.95	0.58	16.54	8.10	8.24	0.45	18.38	7.36	0.01	0.01	99.60
T686	3	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.83	0.14	20.70	3.79	7.63	0.43	21.70	4.26	0.05	0.01	100.53
T686	4	94BCW312	till	0.25-0.5	purple	pyrope	41.54	0.36	21.53	1.92	9.13	0.36	20.77	4.08	0.06	0.00	99.76
T686	5	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.93	0.39	18.88	5.25	7.37	0.35	20.67	5.24	0.03	0.01	99.11
T686	6	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	20.14	3.51	7.71	0.36	21.15	4.94	0.00	0.01	99.68

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T686	7	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.83	0.11	17.94	6.68	7.57	0.35	20.34	5.91	0.00	0.02	99.73
T686	8	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.62	0.21	17.86	7.01	7.10	0.33	20.44	5.80	0.00	0.01	99.37
T686	9	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.42	0.40	17.42	7.26	8.14	0.38	19.30	6.25	0.01	0.01	99.57
T686	10	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.14	0.31	18.42	5.85	7.62	0.36	20.59	5.56	0.01	0.00	99.86
T686	11	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.29	0.31	19.10	5.10	8.42	0.43	19.37	6.52	0.01	0.01	99.55
T686	12	94BCW312	till	0.25-0.5	purple	Cr-pyrope	38.12	0.57	17.17	6.39	7.55	0.42	18.73	7.08	0.05	0.00	96.08
T686	13	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.34	0.49	18.95	4.90	7.97	0.44	19.12	6.79	0.04	0.00	100.04
T686	14	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.70	0.21	17.82	7.12	7.75	0.53	19.98	5.58	0.00	0.00	98.69
T686	15	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.77	0.03	15.69	8.78	7.33	0.41	18.80	5.36	0.03	0.08	96.29
T686	16	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.33	0.21	18.45	6.42	6.87	0.39	20.77	5.55	0.00	0.01	98.99
T686	17	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.47	0.02	18.84	6.20	7.30	0.42	20.89	5.16	0.03	0.01	100.33
T686	18	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.86	0.38	18.60	5.75	7.38	0.41	20.59	5.08	0.06	0.00	99.11
T686	19	94BCW312	till	0.25-0.5	ilky purpl	almandine	37.00	0.03	20.97	0.06	31.95	0.65	6.83	1.37	0.00	0.00	98.87
T686	20	94BCW312	till	0.25-0.5	ilky purpl	almandine	38.01	0.10	21.39	0.05	29.49	0.65	8.29	0.99	0.01	0.00	98.97
T686	21	94BCW312	till	0.25-0.5	ilky purpl	almandine	37.93	0.04	21.38	0.20	29.86	0.47	8.81	0.94	0.00	0.02	99.64
T686	22	94BCW312	till	0.25-0.5	ilky purpl	almandine	35.48	0.16	20.32	0.05	38.34	0.71	2.15	0.85	0.02	0.01	98.09
T686	23	94BCW312	till	0.25-0.5	ilky purpl	almandine	36.65	0.88	22.17	0.01	27.05	0.25	7.04	0.66	0.04	0.07	94.81
T686	24	94BCW312	till	0.25-0.5	ilky purpl	almandine	37.04	0.00	20.86	0.04	34.80	1.02	4.68	0.84	0.00	0.01	99.30
T686	25	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.08	0.00	19.50	5.07	7.86	0.52	19.62	5.69	0.00	0.00	99.34
T686	26	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.51	0.00	16.23	9.50	6.92	0.38	19.01	6.57	0.03	0.00	99.16
T686	27	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.75	0.07	17.61	7.49	6.91	0.35	20.66	5.59	0.00	0.02	100.44
T686	28	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.48	0.12	18.85	6.12	7.43	0.43	20.27	5.38	0.02	0.03	100.11
T686	29	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.97	0.00	18.08	7.33	7.37	0.50	20.72	4.75	0.00	0.00	99.71
T686	30	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.45	0.35	16.49	8.42	7.45	0.41	19.54	6.29	0.01	0.00	99.40
T686	31	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.84	0.05	18.14	7.42	7.43	0.43	19.50	6.29	0.00	0.00	100.10
T686	32	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.88	0.06	16.02	9.06	7.22	0.39	19.68	6.70	0.00	0.01	99.04
T686	33	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.87	0.12	16.18	9.62	6.92	0.43	19.95	5.81	0.05	0.01	98.96
T686	34	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.00	0.22	16.79	8.59	6.92	0.37	20.40	5.79	0.04	0.01	100.13
T686	35	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.02	0.04	17.31	8.30	7.85	0.58	18.72	6.67	0.00	0.00	99.48
T686	36	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.85	0.06	17.23	7.78	6.89	0.37	20.83	5.71	0.00	0.00	99.72
T686	37	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.94	0.32	16.19	8.98	7.38	0.36	19.52	6.31	0.00	0.01	100.00
T686	38	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.76	0.28	17.87	6.92	7.60	0.40	20.47	5.82	0.00	0.00	100.11
T686	39	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.77	0.01	16.80	8.62	7.02	0.43	19.36	6.49	0.00	0.00	98.50
T686	40	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.59	0.24	18.62	6.22	7.07	0.42	20.80	5.43	0.01	0.00	100.39
T686	41	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.77	0.14	16.96	8.44	7.11	0.39	20.34	5.61	0.02	0.01	99.80
T686	42	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.68	0.16	17.67	6.95	6.84	0.37	20.22	6.06	0.00	0.02	98.96
T686	43	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.88	0.10	17.38	8.54	7.03	0.44	20.15	5.93	0.01	0.01	100.47
T686	44	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.17	0.00	17.72	7.65	8.26	0.60	18.85	6.35	0.00	0.01	99.60
T686	45	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.93	0.01	20.29	4.33	6.71	0.40	21.73	4.55	0.02	0.00	98.97
T686	46	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.57	0.00	18.07	7.77	7.24	0.47	22.15	2.68	0.00	0.00	98.95
T686	47	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.05	0.01	16.81	9.37	7.36	0.55	22.41	2.60	0.00	0.00	99.15
T686	48	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.67	0.00	18.05	7.65	7.13	0.46	23.24	2.26	0.00	0.00	100.45
T686	49	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.71	0.36	15.26	10.28	6.50	0.40	19.97	6.44	0.02	0.02	99.95
T686	50	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.24	0.00	16.66	8.84	7.81	0.54	18.21	6.77	0.00	0.01	99.08
T686	51	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.31	0.00	17.29	8.35	6.76	0.40	20.69	5.02	0.02	0.01	99.85
T686	52	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.69	0.18	17.27	7.87	7.25	0.47	19.89	5.50	0.02	0.02	99.14
T686	53	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.08	0.10	18.88	5.93	7.59	0.42	19.47	6.11	0.01	0.00	98.57
T686	54	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.91	0.05	16.22	9.27	6.84	0.39	19.13	6.63	0.01	0.00	99.46
T686	55	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.26	0.12	16.43	8.89	6.77	0.43	20.02	5.75	0.02	0.01	99.69
T686	56	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.82	0.36	15.68	9.67	6.77	0.43	20.05	6.35	0.06	0.00	99.18
T686	57	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.97	0.02	19.03	6.20	7.65	0.57	20.83	4.45	0.02	0.01	99.74
T686	58	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.07	0.04	17.37	7.88	7.12	0.43	20.45	5.62	0.01	0.00	99.97

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T686	59	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.73	0.01	18.76	6.47	7.98	0.53	19.32	5.98	0.00	0.00	99.78
T686	60	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.54	0.24	16.97	8.38	6.78	0.35	20.26	5.99	0.00	0.01	99.51
T686	61	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.65	0.06	18.78	6.51	8.21	0.61	18.72	5.78	0.03	0.01	99.36
T686	62	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.54	0.08	16.58	8.97	7.45	0.40	19.39	5.69	0.01	0.01	99.13
T686	63	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.69	0.03	19.53	5.15	7.87	0.54	19.77	5.13	0.00	0.01	98.72
T686	64	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.88	0.39	17.30	7.44	6.96	0.34	20.42	5.65	0.03	0.00	99.40
T686	65	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.32	0.02	17.81	7.33	7.32	0.51	19.12	5.93	0.00	0.01	99.36
T686	66	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.84	0.00	18.72	6.22	7.93	0.54	19.72	5.85	0.00	0.00	99.82
T686	67	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.45	0.08	17.76	7.51	7.17	0.42	19.89	5.90	0.00	0.00	100.19
T686	68	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.87	0.08	20.04	4.67	7.24	0.41	20.64	4.83	0.00	0.00	98.78
T686	69	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.05	0.01	19.00	5.88	7.59	0.54	19.78	5.59	0.01	0.01	99.44
T686	70	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.51	0.27	16.86	8.22	6.87	0.39	20.09	5.83	0.02	0.00	100.05
T686	71	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.00	0.15	17.79	7.13	7.27	0.40	19.99	6.08	0.01	0.00	98.83
T686	72	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.59	0.00	17.51	7.82	7.06	0.42	19.75	6.07	0.00	0.01	99.22
T686	73	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.26	0.03	17.35	8.04	6.88	0.39	18.99	6.65	0.01	0.01	98.61
T686	74	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.32	0.31	18.81	5.83	7.08	0.44	21.07	5.07	0.03	0.00	99.96
T686	75	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.09	0.22	18.86	5.68	7.36	0.45	20.78	4.85	0.05	0.00	99.33
T686	76	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.61	0.10	16.89	8.45	6.78	0.40	20.55	5.31	0.02	0.02	99.12
T686	77	94BCW312	till	0.25-0.5	purple	Cr-pyrope	39.72	0.06	17.01	8.45	8.25	0.61	17.44	7.54	0.00	0.00	99.08
T686	78	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.07	0.03	18.22	7.27	7.35	0.51	20.66	4.87	0.00	0.00	98.97
T686	79	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.73	0.00	19.26	5.82	7.68	0.51	20.55	4.42	0.01	0.01	100.00
T686	80	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.23	0.09	18.73	6.39	7.03	0.42	20.74	5.10	0.00	0.01	99.74
T686	81	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.12	0.21	18.32	6.33	7.09	0.35	20.81	5.54	0.01	0.02	99.78
T686	82	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.22	0.38	17.95	6.55	7.26	0.32	20.29	5.54	0.05	0.01	99.56
T686	83	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.29	0.00	16.87	8.86	7.64	0.41	20.22	5.14	0.00	0.01	99.43
T686	84	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.22	0.00	18.53	6.84	7.32	0.50	21.82	3.45	0.01	0.01	99.68
T686	85	94BCW312	till	0.25-0.5	purple	Cr-pyrope	41.07	0.32	18.13	6.55	6.90	0.43	20.89	5.42	0.00	0.01	99.71
T686	86	94BCW312	till	0.25-0.5	purple	Cr-pyrope	40.53	0.46	16.54	8.38	7.42	0.44	19.61	6.55	0.01	0.01	99.94
T686	87	94BCW312	till	0.25-0.5	black	tourmaline	36.50	0.12	32.95	0.00	12.25	0.36	2.57	0.06	1.74	0.05	86.60
T686	88	94BCW312	till	0.25-0.5	black	ilmenite	0.05	53.59	0.06	0.03	46.42	1.10	0.16	0.01	0.00	0.00	101.42
T686	89	94BCW312	till	0.25-0.5	black	chromite	0.14	0.61	2.79	61.24	24.25	0.37	8.90	0.02	0.01	0.02	98.33
T686	90	94BCW312	till	0.25-0.5	black	chromite	0.13	3.09	1.80	55.66	28.90	0.46	9.06	0.02	0.00	0.01	99.11
T686	91	94BCW312	till	0.25-0.5	black	chromite	0.12	0.53	1.74	64.68	21.62	0.41	9.44	0.01	0.00	0.00	98.56
T686	92	94BCW312	till	0.25-0.5	orange	almandine	36.21	0.04	20.71	0.02	27.78	2.75	2.05	9.41	0.00	0.02	99.00
T686	93	94BCW312	till	0.25-0.5	orange	almandine	36.54	0.06	20.83	0.04	26.46	2.70	3.34	8.36	0.00	0.00	98.34
T686	94	94BCW312	till	0.25-0.5	orange	almandine	36.77	0.16	20.52	0.03	29.53	1.90	1.98	7.88	0.02	0.00	98.78
T686	95	94BCW312	till	0.25-0.5	pl green	enstatite	57.00	0.04	0.57	0.41	4.72	0.14	35.10	0.43	0.13	0.01	98.53
T686	96	94BCW312	till	0.25-0.5	pl green	olivine	40.54	0.00	0.03	0.03	7.06	0.19	51.14	0.04	0.00	0.01	99.03
T686	97	94BCW312	till	0.25-0.5	pl green	olivine	39.34	0.03	0.04	0.05	8.72	0.12	50.09	0.05	0.00	0.00	98.45
T686	98	94BCW312	till	0.25-0.5	pl green	grossular	37.36	0.00	23.95	0.03	10.30	0.15	0.00	23.13	0.00	0.00	94.93
T686	99	94BCW312	till	0.25-0.5	pl green	olivine	39.55	0.03	0.05	0.05	8.20	0.09	50.66	0.06	0.00	0.02	98.70
T686	100	94BCW312	till	0.25-0.5	pl green	olivine	40.22	0.00	0.04	0.06	8.34	0.12	50.74	0.03	0.00	0.00	99.53
T686	101	94BCW312	till	0.25-0.5	pl green	enstatite	56.62	0.00	0.16	0.39	4.26	0.16	35.90	0.36	0.11	0.03	97.99
T686	102	94BCW312	till	0.25-0.5	pl green	olivine	40.10	0.04	0.04	0.10	8.74	0.13	50.42	0.06	0.00	0.00	99.62
T687	1	94BCW312	till	0.25-0.5	green	Cr-diopside	53.31	0.07	1.27	1.09	2.67	0.11	17.70	20.74	1.03	0.05	98.05
T687	2	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.45	0.21	1.63	1.98	2.56	0.11	17.21	19.00	1.79	0.02	98.94
T687	3	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.09	0.09	1.00	4.22	2.33	0.12	15.86	18.37	2.45	0.03	99.55
T687	4	94BCW312	till	0.25-0.5	green	diopside	53.83	0.07	0.80	0.15	5.68	0.21	15.56	23.31	0.50	0.00	100.10
T687	5	94BCW312	till	0.25-0.5	green	Cr-diopside	54.30	0.19	1.44	1.14	2.52	0.12	17.30	21.21	1.19	0.07	99.45
T687	6	94BCW312	till	0.25-0.5	green	Cr-diopside	52.68	0.30	1.62	1.17	2.84	0.10	17.17	19.69	1.57	0.05	97.19
T687	7	94BCW312	till	0.25-0.5	green	Cr-diopside	52.99	0.09	1.40	1.12	2.60	0.10	17.78	20.37	1.23	0.07	97.74
T687	8	94BCW312	till	0.25-0.5	green	Cr-diopside	54.56	0.18	1.63	1.05	2.84	0.08	18.44	19.58	1.30	0.03	99.70

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	9	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.41	0.18	1.40	1.99	2.59	0.15	17.20	19.25	1.72	0.06	98.94
T687	10	94BCW312	till	0.25-0.5	green	Cr-diopside	53.95	0.06	1.42	1.14	2.61	0.12	17.51	21.04	1.07	0.06	98.98
T687	11	94BCW312	till	0.25-0.5	green	Cr-diopside	54.74	0.16	1.62	1.42	2.36	0.12	17.41	20.56	1.36	0.04	99.78
T687	12	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.47	0.30	1.78	2.11	2.68	0.12	16.96	19.65	1.81	0.05	98.94
T687	13	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.28	0.27	1.46	1.57	2.54	0.09	17.44	19.97	1.54	0.04	99.21
T687	14	94BCW312	till	0.25-0.5	green	Cr-diopside	53.62	0.37	1.79	0.87	3.06	0.13	17.39	19.91	1.50	0.03	98.66
T687	15	94BCW312	till	0.25-0.5	green	Cr-diopside	53.97	0.10	1.61	1.26	2.63	0.10	17.63	20.64	1.33	0.05	99.33
T687	16	94BCW312	till	0.25-0.5	green	Cr-diopside	54.09	0.19	1.61	1.32	2.47	0.08	17.58	20.33	1.32	0.04	99.01
T687	17	94BCW312	till	0.25-0.5	green	Cr-diopside	54.07	0.15	1.20	1.07	2.70	0.09	18.32	20.20	0.97	0.05	98.83
T687	18	94BCW312	till	0.25-0.5	green	Cr-diopside	54.18	0.11	1.29	1.40	2.45	0.12	17.28	20.74	1.37	0.04	98.96
T687	19	94BCW312	till	0.25-0.5	green	Cr-diopside	53.33	0.23	1.36	0.67	2.80	0.10	17.34	20.94	1.04	0.04	97.84
T687	20	94BCW312	till	0.25-0.5	green	Cr-diopside	54.29	0.14	1.56	1.26	2.64	0.10	17.80	20.17	1.29	0.06	99.31
T687	21	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.47	0.24	1.25	1.58	2.37	0.10	17.59	21.27	1.12	0.06	100.05
T687	22	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.88	0.26	1.59	1.68	2.70	0.12	17.05	19.83	1.72	0.03	98.86
T687	23	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.55	0.22	1.74	1.66	2.63	0.11	17.20	19.85	1.70	0.05	98.72
T687	24	94BCW312	till	0.25-0.5	green	Cr-diopside	54.09	0.14	1.42	1.30	2.53	0.07	17.48	21.22	1.16	0.06	99.46
T687	25	94BCW312	till	0.25-0.5	green	Cr-diopside	53.36	0.23	1.02	1.42	2.37	0.11	16.92	21.68	1.12	0.03	98.25
T687	26	94BCW312	till	0.25-0.5	green	Cr-diopside	54.66	0.12	1.55	1.21	2.45	0.11	18.01	19.96	1.28	0.05	99.39
T687	27	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.99	0.32	1.38	2.28	2.41	0.08	16.95	19.96	1.74	0.04	99.15
T687	28	94BCW312	till	0.25-0.5	green	diopside	54.03	0.28	1.85	0.37	3.35	0.11	17.18	19.83	1.38	0.04	98.41
T687	29	94BCW312	till	0.25-0.5	green	HiCr-diopsid	52.52	0.24	1.76	1.59	2.59	0.07	17.09	19.62	1.45	0.09	97.02
T687	30	94BCW312	till	0.25-0.5	green	Cr-diopside	53.36	0.20	1.68	1.29	2.64	0.10	17.87	20.34	1.31	0.03	98.83
T687	31	94BCW312	till	0.25-0.5	green	Cr-diopside	53.76	0.09	1.30	1.07	2.75	0.07	18.62	20.06	1.01	0.08	98.81
T687	32	94BCW312	till	0.25-0.5	green	Cr-diopside	54.25	0.13	1.65	1.18	2.72	0.11	17.81	19.53	1.36	0.03	98.78
T687	33	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.48	0.02	1.17	2.82	1.90	0.10	17.00	20.62	1.67	0.02	98.79
T687	34	94BCW312	till	0.25-0.5	green	Cr-diopside	53.49	0.17	1.63	1.24	2.67	0.12	17.71	19.89	1.25	0.17	98.33
T687	35	94BCW312	till	0.25-0.5	green	Cr-diopside	52.97	0.16	0.80	0.76	2.71	0.11	17.32	22.41	0.90	0.02	98.17
T687	36	94BCW312	till	0.25-0.5	green	Cr-diopside	54.19	0.18	1.64	1.35	2.51	0.01	17.38	20.41	1.34	0.06	99.05
T687	37	94BCW312	till	0.25-0.5	green	Cr-diopside	53.60	0.16	1.20	1.45	2.48	0.09	17.07	21.15	1.26	0.06	98.53
T687	38	94BCW312	till	0.25-0.5	green	Cr-diopside	53.76	0.15	1.32	1.21	2.51	0.09	17.99	20.41	1.02	0.07	98.51
T687	39	94BCW312	till	0.25-0.5	green	Cr-diopside	53.69	0.08	2.06	0.93	2.53	0.08	16.92	19.87	1.50	0.01	97.65
T687	40	94BCW312	till	0.25-0.5	green	Cr-diopside	54.02	0.19	1.31	0.80	2.65	0.15	17.26	21.87	0.99	0.03	99.26
T687	41	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.56	0.30	1.60	1.90	2.57	0.11	16.86	19.45	1.81	0.03	98.17
T687	42	94BCW312	till	0.25-0.5	green	Cr-diopside	52.89	0.15	1.33	1.16	2.97	0.11	18.07	18.95	0.98	0.07	96.66
T687	43	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.51	0.35	1.69	2.12	2.53	0.06	16.88	19.32	1.78	0.04	98.28
T687	44	94BCW312	till	0.25-0.5	green	Cr-diopside	54.07	0.09	1.61	1.31	2.49	0.07	17.60	19.92	1.32	0.05	98.53
T687	45	94BCW312	till	0.25-0.5	green	Cr-diopside	53.97	0.14	1.74	1.25	2.64	0.05	17.52	19.95	1.27	0.05	98.58
T687	46	94BCW312	till	0.25-0.5	green	Cr-diopside	54.20	0.19	1.52	1.15	2.66	0.13	17.88	20.14	1.20	0.04	99.12
T687	47	94BCW312	till	0.25-0.5	green	Cr-diopside	52.76	0.14	1.43	1.04	2.70	0.09	17.87	20.29	1.07	0.06	97.44
T687	48	94BCW312	till	0.25-0.5	green	Cr-diopside	53.96	0.35	0.52	1.34	2.26	0.10	17.71	22.88	0.57	0.02	99.71
T687	49	94BCW312	till	0.25-0.5	green	Cr-diopside	53.48	0.15	1.35	1.25	2.56	0.12	18.11	20.58	1.14	0.05	98.80
T687	50	94BCW312	till	0.25-0.5	green	Cr-diopside	54.85	0.09	1.18	1.07	2.70	0.10	18.31	20.13	0.97	0.07	99.47
T687	51	94BCW312	till	0.25-0.5	green	Cr-diopside	54.74	0.19	1.32	1.02	2.59	0.15	17.57	20.98	1.05	0.05	99.66
T687	52	94BCW312	till	0.25-0.5	green	Cr-diopside	53.27	0.11	1.25	1.09	2.55	0.11	17.88	21.23	1.04	0.05	98.58
T687	53	94BCW312	till	0.25-0.5	green	Cr-diopside	52.57	0.11	1.47	1.19	2.62	0.12	17.64	20.43	1.15	0.07	97.37
T687	54	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.74	0.37	1.67	1.84	2.54	0.10	16.70	19.91	1.75	0.03	98.64
T687	55	94BCW312	till	0.25-0.5	green	Cr-diopside	53.21	0.02	1.30	1.22	2.46	0.07	18.50	20.10	1.14	0.08	98.09
T687	56	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.03	0.22	1.49	1.76	2.64	0.10	17.21	19.87	1.64	0.04	98.99
T687	57	94BCW312	till	0.25-0.5	green	Cr-diopside	53.78	0.10	1.61	1.26	2.68	0.10	17.66	20.23	1.23	0.07	98.73
T687	58	94BCW312	till	0.25-0.5	green	Cr-diopside	53.89	0.12	1.27	1.08	2.64	0.16	17.55	20.42	1.02	0.05	98.19
T687	59	94BCW312	till	0.25-0.5	green	Cr-diopside	52.73	0.17	1.61	1.26	2.67	0.09	17.32	20.77	1.34	0.06	98.00
T687	60	94BCW312	till	0.25-0.5	green	Cr-diopside	53.84	0.09	1.61	1.30	2.61	0.09	17.54	20.03	1.33	0.06	98.50

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	61	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.27	0.22	1.18	1.64	2.40	0.09	17.30	21.09	1.33	0.04	98.56
T687	62	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.64	0.22	1.41	1.66	2.50	0.11	17.05	20.75	1.50	0.03	98.87
T687	63	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.20	0.03	1.27	3.14	2.25	0.07	16.39	19.04	2.12	0.03	98.54
T687	64	94BCW312	till	0.25-0.5	green	Cr-diopside	54.04	0.08	1.39	1.21	2.62	0.08	17.77	20.24	1.15	0.06	98.62
T687	65	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.44	0.15	1.67	1.74	2.50	0.14	17.61	20.06	1.45	0.05	98.80
T687	66	94BCW312	till	0.25-0.5	green	Cr-diopside	53.13	0.10	1.29	1.05	2.62	0.11	17.91	20.92	1.04	0.05	98.20
T687	67	94BCW312	till	0.25-0.5	green	Cr-diopside	53.24	0.17	0.64	0.63	2.81	0.13	17.89	22.51	0.66	0.00	98.67
T687	68	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.33	0.20	1.56	2.16	2.52	0.09	16.74	20.01	1.75	0.04	98.39
T687	69	94BCW312	till	0.25-0.5	green	Cr-diopside	53.32	0.02	1.27	1.14	2.51	0.13	17.95	20.91	1.06	0.06	98.38
T687	70	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.93	0.25	1.33	1.55	2.31	0.13	17.25	20.82	1.21	0.06	98.83
T687	71	94BCW312	till	0.25-0.5	green	Cr-diopside	54.14	0.15	1.43	1.16	2.58	0.08	17.96	19.96	1.21	0.14	96.80
T687	72	94BCW312	till	0.25-0.5	green	Cr-diopside	52.47	0.06	1.24	1.06	2.57	0.04	17.45	20.94	1.05	0.03	96.91
T687	73	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.96	0.16	1.69	2.24	2.31	0.13	16.82	20.10	1.77	0.03	99.22
T687	74	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.20	0.06	0.72	4.62	1.96	0.10	16.32	18.67	2.34	0.05	98.04
T687	75	94BCW312	till	0.25-0.5	green	Cr-diopside	54.32	0.23	1.36	1.27	2.42	0.09	17.10	21.66	1.23	0.05	99.74
T687	76	94BCW312	till	0.25-0.5	green	Cr-diopside	54.94	0.22	1.37	1.01	2.86	0.13	17.74	19.76	1.06	0.05	99.13
T687	77	94BCW312	till	0.25-0.5	green	Cr-diopside	53.26	0.18	1.66	1.31	2.61	0.11	17.53	20.17	1.36	0.06	98.25
T687	78	94BCW312	till	0.25-0.5	green	Cr-diopside	54.08	0.28	1.28	0.99	2.47	0.09	17.69	21.17	1.03	0.05	99.13
T687	79	94BCW312	till	0.25-0.5	green	Cr-diopside	53.60	0.15	1.40	1.14	2.66	0.12	17.74	20.57	1.17	0.06	98.61
T687	80	94BCW312	till	0.25-0.5	green	Cr-diopside	53.13	0.09	1.31	1.13	2.72	0.11	18.04	20.62	1.09	0.05	98.27
T687	81	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.32	0.18	1.55	2.10	2.56	0.09	17.54	19.71	1.49	0.04	98.58
T687	82	94BCW312	till	0.25-0.5	green	Cr-diopside	54.75	0.13	1.58	1.33	2.57	0.12	17.71	20.22	1.30	0.05	99.76
T687	83	94BCW312	till	0.25-0.5	green	Cr-diopside	53.13	0.06	1.39	1.18	2.88	0.13	18.20	19.52	1.10	0.07	97.64
T687	84	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.14	0.09	1.52	1.65	2.28	0.12	17.33	19.82	1.45	0.05	97.44
T687	85	94BCW312	till	0.25-0.5	green	Cr-diopside	53.08	0.09	1.32	1.11	2.60	0.09	18.04	20.77	1.07	0.06	98.22
T687	86	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.45	0.15	0.48	3.25	2.00	0.07	16.85	20.14	1.76	0.03	99.16
T687	87	94BCW312	till	0.25-0.5	green	Cr-diopside	54.96	0.03	1.20	1.10	2.67	0.08	18.41	20.43	0.97	0.08	99.94
T687	88	94BCW312	till	0.25-0.5	green	Cr-diopside	54.45	0.24	1.53	1.07	2.92	0.11	17.40	20.63	1.23	0.05	99.63
T687	89	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.19	0.29	1.42	1.71	2.39	0.10	17.06	20.43	1.48	0.04	99.11
T687	90	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.07	0.21	1.39	1.77	2.43	0.09	17.69	20.61	1.37	0.06	99.69
T687	91	94BCW312	till	0.25-0.5	green	Cr-diopside	54.55	0.09	1.23	1.11	2.64	0.13	18.54	20.66	1.02	0.05	100.02
T687	92	94BCW312	till	0.25-0.5	green	Cr-diopside	53.79	0.13	1.57	1.29	2.62	0.15	17.98	20.13	1.31	0.05	99.01
T687	93	94BCW312	till	0.25-0.5	green	Cr-diopside	54.27	0.23	1.30	1.40	2.59	0.11	17.21	21.07	1.13	0.06	99.38
T687	94	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.42	0.24	1.70	1.86	2.53	0.07	16.66	19.57	1.85	0.02	97.93
T687	95	94BCW312	till	0.25-0.5	green	Cr-diopside	53.65	0.10	1.30	1.14	2.56	0.12	17.76	20.75	1.05	0.08	98.50
T687	96	94BCW312	till	0.25-0.5	green	Cr-diopside	53.17	0.18	1.49	1.11	2.61	0.11	17.54	20.43	1.17	0.05	97.86
T687	97	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.68	0.14	0.75	4.23	2.18	0.12	15.88	18.62	2.39	0.00	97.98
T687	98	94BCW312	till	0.25-0.5	green	HiCr-diopsid	55.09	0.26	1.67	2.34	2.43	0.14	16.98	19.08	1.99	0.04	100.02
T687	99	94BCW312	till	0.25-0.5	green	Cr-diopside	53.65	0.21	1.41	1.10	2.55	0.13	17.66	21.20	1.14	0.03	99.09
T687	100	94BCW312	till	0.25-0.5	green	Cr-diopside	53.13	0.08	2.28	0.98	2.81	0.11	16.94	19.45	1.81	0.02	97.60
T687	101	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.69	0.17	1.32	2.08	2.38	0.07	17.01	19.96	1.68	0.03	98.40
T687	102	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.48	0.11	0.71	1.86	1.94	0.06	17.25	22.16	1.14	0.04	99.74
T687	103	94BCW312	till	0.25-0.5	green	Cr-diopside	53.45	0.15	1.60	1.30	2.62	0.12	17.92	20.33	1.34	0.05	98.87
T687	104	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.47	0.14	1.56	1.76	2.55	0.09	17.52	20.02	1.32	0.03	98.45
T687	105	94BCW312	till	0.25-0.5	green	Cr-diopside	53.48	0.20	1.34	0.97	2.67	0.13	17.48	20.54	1.10	0.05	97.94
T687	106	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.11	0.24	1.63	1.53	2.55	0.12	17.33	20.03	1.46	0.04	99.02
T687	107	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.38	0.05	2.52	2.13	2.42	0.11	16.26	18.42	2.37	0.03	97.70
T687	108	94BCW312	till	0.25-0.5	green	Cr-diopside	54.35	0.28	1.41	0.92	2.77	0.06	17.44	20.99	1.30	0.03	99.53
T687	109	94BCW312	till	0.25-0.5	green	Cr-diopside	53.16	0.13	1.26	1.06	2.77	0.10	18.17	20.23	1.03	0.08	97.99
T687	110	94BCW312	till	0.25-0.5	green	Cr-diopside	53.39	0.11	1.68	1.47	2.68	0.09	17.34	20.05	1.37	0.08	98.26
T687	111	94BCW312	till	0.25-0.5	green	Cr-diopside	54.26	0.24	1.59	1.07	2.91	0.14	18.26	19.76	1.28	0.05	99.54
T687	112	94BCW312	till	0.25-0.5	green	Cr-diopside	53.33	0.27	1.53	1.29	2.53	0.09	17.02	20.16	1.50	0.02	97.74

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T687	113	94BCW312	till	0.25-0.5	green	Cr-diopside	54.10	0.16	1.59	1.29	2.61	0.13	17.28	20.15	1.35	0.05	98.71
T687	114	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.29	0.27	1.38	2.37	2.34	0.09	16.82	19.78	1.84	0.06	98.24
T687	115	94BCW312	till	0.25-0.5	green	Cr-diopside	53.38	0.11	1.33	1.15	2.69	0.11	17.74	20.02	1.09	0.06	97.67
T687	116	94BCW312	till	0.25-0.5	green	HiCr-diopsid	53.33	0.17	1.47	1.80	2.37	0.13	17.34	20.77	1.27	0.05	98.69
T687	117	94BCW312	till	0.25-0.5	green	Cr-diopside	53.91	0.22	1.46	1.33	2.44	0.14	17.28	20.63	1.22	0.03	98.65
T687	118	94BCW312	till	0.25-0.5	green	HiCr-diopsid	54.15	0.26	1.57	1.57	2.73	0.12	17.09	19.95	1.65	0.03	99.11
T687	119	94BCW312	till	0.25-0.5	green	HiCr-diopsid	52.32	0.12	0.95	1.57	2.07	0.06	17.18	21.94	1.09	0.03	97.32
T687	120	94BCW312	till	0.25-0.5	green	Cr-diopside	53.94	0.12	1.60	1.39	2.64	0.10	17.83	19.35	1.32	0.04	98.31
T687	121	94BCW312	till	0.25-0.5	green	Cr-diopside	54.60	0.25	1.60	1.35	2.84	0.12	17.71	19.17	1.38	0.05	99.06
T706	48	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.43	0.08	16.00	9.99	7.02	0.43	19.68	6.81	0.01	0.00	100.45
T706	49	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.91	0.05	17.50	8.17	7.04	0.40	19.71	6.30	0.00	0.01	100.10
T706	50	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.14	0.10	19.63	5.36	7.95	0.47	20.11	5.73	0.00	0.00	100.48
T706	51	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.02	0.37	16.81	8.20	6.96	0.37	20.03	5.94	0.03	0.01	99.74
T706	52	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.26	0.17	20.02	4.21	7.74	0.41	21.46	4.67	0.03	0.01	99.97
T706	53	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.97	0.34	18.98	5.10	8.44	0.45	19.27	6.44	0.04	0.02	100.04
T706	54	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.81	0.03	17.63	7.93	7.67	0.55	19.53	5.65	0.00	0.01	99.81
T706	55	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.68	0.00	19.71	5.19	7.63	0.43	20.74	5.36	0.00	0.00	99.74
T706	56	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.89	0.43	19.17	5.17	7.92	0.43	20.85	4.96	0.03	0.02	99.87
T706	57	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.19	0.14	21.08	2.82	8.11	0.42	20.89	4.43	0.03	0.02	99.12
T706	58	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.68	0.17	20.54	3.89	7.54	0.36	21.92	4.89	0.03	0.00	100.02
T706	59	94BCW312	till	0.5-0.84	purple	Cr-pyrope	40.63	0.10	16.64	9.49	7.00	0.43	20.42	5.64	0.00	0.02	100.37
T706	60	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.02	0.39	17.81	6.95	7.15	0.41	20.55	5.79	0.03	0.00	100.09
T706	61	94BCW312	till	0.5-0.84	purple	Cr-pyrope	39.61	0.11	18.73	6.86	7.26	0.50	20.09	4.93	0.02	0.01	98.11
T706	62	94BCW312	till	0.5-0.84	purple	Cr-pyrope	41.18	0.02	19.51	5.62	7.93	0.48	19.95	5.78	0.00	0.00	100.47
T706	63	94BCW312	till	0.5-0.84	purple	Cr-pyrope	42.87	0.37	17.65	7.25	7.72	0.41	20.37	5.81	0.04	0.00	102.49
T706	64	94BCW312	till	0.5-0.84	orange	almandine	38.10	0.03	21.15	0.03	25.05	1.78	2.19	12.89	0.02	0.01	101.23
T706	65	94BCW312	till	0.5-0.84	orange	almandine	37.32	0.13	21.04	0.04	29.15	1.56	2.29	9.60	0.01	0.01	101.14
T706	66	94BCW312	till	0.5-0.84	orange	almandine	37.45	0.05	21.04	0.02	25.81	3.36	1.89	10.21	0.00	0.00	99.82
T706	67	94BCW312	till	0.5-0.84	green	Cr-diopside	54.20	0.16	1.39	1.04	2.58	0.10	17.71	21.13	1.19	0.04	99.53
T706	68	94BCW312	till	0.5-0.84	green	Cr-diopside	54.15	0.08	1.27	1.11	2.64	0.09	18.21	20.79	1.10	0.08	99.51
T706	69	94BCW312	till	0.5-0.84	green	Cr-diopside	54.04	0.26	1.26	1.05	2.52	0.11	17.62	21.52	1.10	0.03	99.51
T706	70	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.04	0.14	1.20	1.70	2.52	0.06	17.03	21.01	1.28	0.04	99.02
T706	71	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.24	0.23	1.26	1.63	2.57	0.08	17.11	20.92	1.47	0.04	99.55
T706	72	94BCW312	till	0.5-0.84	green	Cr-diopside	53.12	0.08	1.58	1.29	2.74	0.09	17.82	20.32	1.31	0.05	98.41
T706	73	94BCW312	till	0.5-0.84	green	Cr-diopside	54.39	0.17	1.30	1.10	2.67	0.13	17.72	21.33	1.06	0.06	99.94
T706	74	94BCW312	till	0.5-0.84	green	Cr-diopside	54.48	0.25	1.48	1.25	2.67	0.09	18.06	21.02	1.15	0.06	100.53
T706	75	94BCW312	till	0.5-0.84	green	Cr-diopside	53.71	0.14	1.54	1.19	2.52	0.08	18.05	20.42	1.30	0.06	99.02
T706	76	94BCW312	till	0.5-0.84	green	Cr-diopside	54.02	0.02	1.36	1.13	2.62	0.14	17.94	21.27	1.06	0.06	99.61
T706	77	94BCW312	till	0.5-0.84	green	HiCr-diopsid	53.56	0.10	1.58	2.16	2.63	0.13	17.15	19.63	1.89	0.05	98.87
T706	78	94BCW312	till	0.5-0.84	green	Cr-diopside	55.11	0.16	1.33	1.07	2.58	0.08	17.93	20.89	1.04	0.05	100.23
T706	79	94BCW312	till	0.5-0.84	green	Cr-diopside	54.08	0.09	1.23	1.07	2.62	0.07	18.48	20.67	1.05	0.05	99.40
T706	80	94BCW312	till	0.5-0.84	green	Cr-diopside	54.49	0.10	1.68	1.28	2.60	0.07	17.78	20.32	1.34	0.04	99.70
T706	81	94BCW312	till	0.5-0.84	green	Cr-diopside	54.05	0.26	1.32	0.95	2.53	0.05	17.18	21.59	1.30	0.08	99.30
T706	82	94BCW312	till	0.5-0.84	green	Cr-diopside	53.14	0.14	1.72	1.21	2.84	0.14	18.89	19.61	1.11	0.21	99.00
T706	83	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.27	0.05	1.66	1.55	2.64	0.06	17.68	20.47	1.47	0.06	99.90
T706	84	94BCW312	till	0.5-0.84	green	HiCr-diopsid	55.14	0.34	1.72	2.14	2.67	0.11	16.71	19.46	1.92	0.03	100.24
T706	85	94BCW312	till	0.5-0.84	green	Cr-diopside	54.08	0.23	1.69	1.39	2.44	0.09	17.11	20.12	1.47	0.06	98.68
T706	86	94BCW312	till	0.5-0.84	green	HiCr-diopsid	53.71	0.20	0.93	1.50	2.38	0.12	17.41	22.27	1.13	0.04	99.69
T706	87	94BCW312	till	0.5-0.84	green	HiCr-diopsid	54.94	0.07	0.56	2.61	1.90	0.10	17.00	21.38	1.50	0.00	100.05
T706	88	94BCW312	till	0.5-0.84	green	Cr-diopside	54.83	0.15	0.80	1.37	2.23	0.09	17.78	21.96	1.06	0.02	100.29
T706	89	94BCW312	till	0.5-0.84	green	Cr-diopside	54.50	0.25	1.42	0.76	2.82	0.09	17.50	21.32	1.03	0.06	99.74
T706	90	94BCW312	till	0.5-0.84	green	Cr-diopside	54.95	0.10	1.26	1.22	2.66	0.12	18.13	21.14	1.11	0.09	100.79

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T706	91	94BCW312	till	0.5-0.84	green	Cr-diopside	54.31	0.26	1.39	1.14	2.51	0.09	17.85	21.42	1.19	0.07	100.22
T706	92	94BCW312	till	0.5-0.84	green	Cr-diopside	54.71	0.08	1.33	1.11	2.58	0.12	17.88	21.34	1.11	0.06	100.32
T706	93	94BCW312	till	0.5-0.84	green	Cr-diopside	54.96	0.13	1.50	1.37	2.88	0.16	18.37	18.95	1.33	0.07	99.72
T706	94	94BCW312	till	0.5-0.84	pl green	olivine	40.54	0.05	0.00	0.05	6.97	0.07	52.28	0.03	0.00	0.02	100.01
T706	95	94BCW312	till	0.5-0.84	pl green	olivine	40.03	0.00	0.03	0.05	7.94	0.13	51.44	0.04	0.00	0.02	99.69
T706	96	94BCW312	till	0.5-0.84	pl green	olivine	39.95	0.00	0.02	0.03	7.81	0.09	51.26	0.04	0.00	0.00	99.20
T706	97	94BCW312	till	0.5-0.84	pl green	olivine	40.44	0.01	0.03	0.06	7.62	0.14	51.19	0.05	0.00	0.00	99.53
T688	1	94BCW313	till	0.25-0.5	purple	Cr-pyrope	42.01	0.00	17.11	9.10	6.72	0.34	22.53	3.18	0.00	0.00	101.01
T688	2	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.02	0.08	17.94	7.60	7.64	0.56	20.03	4.87	0.00	0.00	99.75
T688	3	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.73	0.01	18.18	7.07	7.02	0.37	20.31	5.92	0.02	0.00	100.64
T688	4	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.88	0.00	19.49	5.38	7.22	0.41	22.54	3.08	0.02	0.00	100.02
T688	5	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.85	0.05	16.97	8.49	7.77	0.60	18.30	6.99	0.00	0.00	99.03
T688	6	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.19	0.04	18.58	6.25	7.55	0.45	19.55	5.91	0.00	0.01	99.54
T688	7	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.90	0.17	16.52	8.83	7.20	0.49	20.02	5.69	0.03	0.02	98.85
T688	8	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.96	0.12	18.65	6.34	7.01	0.40	20.44	5.98	0.00	0.00	99.89
T688	9	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.13	0.09	17.62	7.57	7.23	0.37	20.55	5.43	0.04	0.00	99.04
T688	10	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.28	0.03	18.37	7.12	7.24	0.56	21.02	4.32	0.00	0.00	98.93
T688	11	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.71	0.04	18.95	5.64	7.99	0.51	19.28	5.89	0.00	0.00	98.01
T688	12	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.77	0.00	18.82	6.55	7.13	0.53	22.54	2.61	0.00	0.02	98.96
T688	13	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.76	0.04	17.32	8.18	8.04	0.56	18.92	6.64	0.00	0.02	99.47
T688	14	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.13	0.00	16.96	8.76	6.86	0.42	20.52	5.14	0.00	0.00	98.80
T688	15	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.80	0.17	16.80	8.45	7.16	0.42	19.96	5.79	0.02	0.00	99.57
T688	16	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.62	0.00	19.36	5.37	7.60	0.43	20.34	5.30	0.03	0.01	99.04
T688	17	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.41	0.22	16.88	8.37	7.21	0.43	19.99	5.78	0.02	0.00	98.31
T688	18	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.07	0.04	16.86	8.76	7.00	0.45	19.54	6.49	0.02	0.00	99.23
T688	19	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.22	0.31	18.19	6.23	7.36	0.37	20.64	5.48	0.01	0.00	98.81
T688	20	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.55	0.18	17.54	7.43	7.07	0.39	20.60	5.77	0.01	0.00	100.54
T688	21	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.50	0.15	21.10	2.99	8.76	0.49	20.47	4.48	0.01	0.00	99.94
T688	22	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.61	0.22	15.43	8.94	11.81	0.62	15.47	7.59	0.00	0.02	99.71
T688	23	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.69	0.46	17.94	6.33	7.60	0.45	20.22	5.89	0.02	0.01	99.61
T688	24	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.08	0.38	17.86	6.48	7.86	0.46	19.60	6.25	0.02	0.01	98.99
T688	25	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.13	0.32	16.67	8.53	7.04	0.38	20.09	5.71	0.06	0.02	98.95
T688	26	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.50	0.11	20.23	4.17	6.82	0.38	21.37	4.81	0.00	0.00	99.40
T688	27	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.04	0.36	18.13	6.26	8.30	0.41	19.66	5.99	0.00	0.00	100.15
T688	28	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.90	0.12	18.50	6.08	7.44	0.46	20.40	5.09	0.03	0.00	99.00
T688	29	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.62	0.32	17.97	6.60	7.17	0.39	20.68	5.29	0.03	0.01	99.09
T688	30	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.85	0.03	15.69	9.56	7.98	0.47	19.11	6.21	0.00	0.02	98.92
T688	31	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.57	0.30	17.92	6.13	7.51	0.36	20.42	5.25	0.02	0.01	98.49
T688	32	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.67	0.00	16.63	8.64	6.91	0.41	20.10	5.96	0.01	0.00	98.31
T688	33	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.95	0.43	18.56	5.56	7.57	0.47	20.53	5.10	0.05	0.02	98.23
T688	34	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.56	0.01	18.85	5.94	7.57	0.47	20.00	5.58	0.00	0.01	98.98
T688	35	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.91	0.22	18.33	5.67	7.70	0.40	20.06	6.05	0.00	0.00	98.33
T688	36	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.32	0.37	18.91	4.67	8.63	0.39	18.79	6.75	0.04	0.01	98.88
T688	37	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.72	0.25	18.87	5.48	7.41	0.40	20.70	4.87	0.00	0.00	97.71
T688	38	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.09	0.37	18.16	5.83	7.46	0.37	21.41	5.43	0.00	0.00	100.12
T688	39	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.25	0.52	17.54	6.49	7.88	0.44	18.81	7.31	0.04	0.00	99.29
T688	40	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.08	0.35	18.43	5.53	8.25	0.42	19.91	5.82	0.01	0.00	98.79
T688	41	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.71	0.23	17.95	6.60	7.19	0.36	20.42	5.61	0.02	0.02	99.11
T688	42	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.38	0.27	19.38	4.97	7.04	0.40	21.06	5.11	0.04	0.01	98.66
T688	43	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.25	0.34	17.84	6.42	7.58	0.35	20.39	5.71	0.01	0.01	99.90
T688	44	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.29	0.39	15.04	10.16	7.42	0.41	19.61	6.79	0.02	0.02	100.13
T688	45	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.19	0.35	17.14	7.52	7.57	0.41	19.57	6.20	0.03	0.04	100.01

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T688	46	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.76	0.30	18.15	6.77	7.19	0.43	20.49	5.39	0.02	0.00	99.50
T688	47	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.72	0.00	18.12	7.00	7.04	0.41	20.03	6.06	0.01	0.00	99.40
T688	48	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.91	0.33	18.57	5.36	8.55	0.45	19.43	6.28	0.01	0.00	99.87
T688	49	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.59	0.18	17.51	7.53	6.89	0.37	20.46	5.68	0.00	0.01	99.22
T688	50	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.40	0.40	18.33	5.98	6.70	0.39	20.85	5.36	0.03	0.01	99.44
T688	51	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.85	0.35	18.77	4.78	8.39	0.41	18.77	6.74	0.00	0.00	98.05
T688	52	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.20	0.36	18.79	5.18	6.93	0.42	21.37	5.20	0.06	0.00	99.50
T688	53	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.12	0.46	18.85	4.76	7.81	0.36	20.68	5.12	0.05	0.00	99.22
T688	54	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.85	0.31	19.44	4.51	8.21	0.40	19.85	5.63	0.02	0.00	99.22
T688	55	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.53	0.46	18.59	5.57	7.03	0.38	21.30	5.33	0.05	0.01	100.24
T688	56	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.13	0.18	18.67	5.30	7.82	0.35	19.44	5.89	0.01	0.02	97.81
T688	57	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.95	0.12	20.66	3.57	8.03	0.46	20.70	4.66	0.01	0.00	99.16
T688	58	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.50	0.35	19.23	4.68	7.82	0.48	20.46	5.47	0.02	0.00	99.02
T688	59	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.24	0.35	19.44	4.12	8.18	0.40	19.97	5.56	0.00	0.00	98.26
T688	60	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.89	0.10	18.81	5.23	7.41	0.36	20.19	5.31	0.01	0.02	98.31
T688	61	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.15	0.41	17.91	6.20	7.93	0.34	19.68	5.85	0.02	0.01	99.49
T688	62	94BCW313	till	0.25-0.5	purple	Cr-pyrope	42.05	0.31	20.31	3.37	7.69	0.35	20.91	4.95	0.03	0.01	99.98
T688	63	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.44	0.22	19.57	4.29	8.00	0.46	20.60	5.21	0.00	0.00	99.78
T688	64	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.28	0.00	18.22	6.92	8.29	0.51	18.83	6.57	0.00	0.00	100.63
T688	65	94BCW313	till	0.25-0.5	purple	Cr-pyrope	42.31	0.27	20.95	3.20	7.81	0.43	21.24	4.37	0.02	0.00	100.59
T688	66	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.68	0.30	20.81	3.05	7.73	0.44	21.78	4.32	0.02	0.00	100.13
T688	67	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.80	0.35	19.61	4.45	7.91	0.37	20.37	5.80	0.00	0.00	99.67
T688	68	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.71	0.34	19.30	4.60	8.02	0.34	20.99	5.15	0.00	0.00	100.44
T688	69	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.71	0.79	17.59	5.94	8.20	0.36	20.49	5.38	0.02	0.00	99.49
T688	70	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.98	0.47	18.06	6.52	7.28	0.40	20.43	5.58	0.04	0.01	99.77
T688	71	94BCW313	till	0.25-0.5	purple	Cr-pyrope	42.02	0.54	19.59	4.50	6.66	0.34	21.37	4.83	0.02	0.02	99.89
T688	72	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.75	0.00	20.78	3.40	7.96	0.37	21.09	4.62	0.01	0.02	98.99
T688	73	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.25	0.35	18.65	5.37	7.49	0.38	20.63	5.41	0.01	0.00	98.54
T688	74	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.53	0.42	19.08	4.62	8.24	0.47	19.85	5.82	0.01	0.00	99.05
T688	75	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.72	0.35	17.34	6.56	7.45	0.41	19.59	5.51	0.02	0.01	97.95
T688	76	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.42	0.46	19.00	4.77	8.06	0.40	19.39	6.29	0.03	0.01	99.82
T688	77	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.69	0.41	19.12	4.34	7.53	0.40	21.10	5.16	0.04	0.00	98.78
T688	78	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.51	0.48	18.56	5.55	7.17	0.38	20.74	4.91	0.00	0.01	98.31
T688	79	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.89	0.30	18.53	5.62	7.53	0.32	20.26	5.41	0.00	0.01	98.87
T688	80	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.28	0.43	17.94	6.64	7.17	0.37	20.83	5.65	0.03	0.00	100.33
T688	81	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.51	0.28	17.69	6.42	7.87	0.35	20.45	5.73	0.01	0.01	100.32
T688	82	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.62	0.08	15.82	10.12	6.86	0.45	20.04	5.43	0.02	0.00	99.45
T688	83	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.75	0.02	18.67	6.35	8.02	0.47	19.58	5.33	0.00	0.01	99.20
T688	84	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.08	0.44	18.19	6.22	6.76	0.41	21.05	5.51	0.05	0.00	99.72
T688	85	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.51	0.04	19.34	5.60	7.11	0.36	21.00	5.44	0.02	0.02	99.44
T688	86	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.52	0.15	17.10	8.01	7.77	0.51	19.98	5.59	0.06	0.00	100.69
T688	87	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.54	0.63	18.49	5.19	9.00	0.45	19.31	5.56	0.03	0.00	99.22
T688	88	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.40	0.36	18.66	5.24	8.29	0.36	18.91	6.76	0.03	0.00	99.00
T688	89	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.87	0.00	18.92	6.46	6.80	0.43	21.12	5.70	0.00	0.00	100.30
T688	90	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.79	0.45	16.56	7.80	7.45	0.40	19.99	6.04	0.04	0.02	98.53
T688	91	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.59	0.47	16.22	8.43	7.19	0.36	19.87	6.13	0.03	0.01	99.30
T688	92	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.52	0.00	20.00	5.06	6.92	0.32	23.29	2.31	0.00	0.00	99.41
T688	93	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.43	0.34	16.30	9.00	7.08	0.42	19.78	6.07	0.03	0.01	99.43
T688	94	94BCW313	till	0.25-0.5	purple	Cr-pyrope	38.91	0.49	14.87	10.06	7.36	0.39	19.21	7.07	0.02	0.01	98.40
T688	95	94BCW313	till	0.25-0.5	purple	Cr-pyrope	41.62	0.46	19.19	4.73	7.31	0.34	20.82	5.09	0.03	0.01	99.59
T688	96	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.47	0.11	18.84	5.73	7.64	0.40	19.46	6.44	0.01	0.00	99.10
T688	97	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.57	0.00	18.30	7.31	6.73	0.39	22.46	3.16	0.00	0.01	98.94

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T688	98	94BCW313	till	0.25-0.5	purple	Cr-pyrope	40.05	0.03	18.02	6.72	7.78	0.41	19.78	6.01	0.02	0.01	98.82
T688	99	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.92	0.24	18.39	5.56	8.16	0.34	19.35	6.05	0.03	0.01	98.05
T688	100	94BCW313	till	0.25-0.5	purple	Cr-pyrope	39.83	0.23	15.30	10.66	6.95	0.41	19.62	6.42	0.01	0.00	99.41
T688	101	94BCW313	till	0.25-0.5	ilky purpl	almandine	38.44	0.17	21.33	0.07	28.64	0.30	9.58	0.97	0.00	0.00	99.49
T688	102	94BCW313	till	0.25-0.5	ilky purpl	almandine	37.25	0.13	21.46	0.07	30.17	0.46	8.78	1.02	0.00	0.02	99.34
T688	103	94BCW313	till	0.25-0.5	ilky purpl	almandine	37.34	0.16	21.20	0.05	30.48	0.33	8.27	1.03	0.02	0.00	98.88
T688	104	94BCW313	till	0.25-0.5	ilky purpl	almandine	37.68	0.03	21.19	0.03	32.37	0.46	7.38	0.52	0.00	0.00	99.66
T688	105	94BCW313	till	0.25-0.5	ilky purpl	almandine	36.59	0.02	20.94	0.06	33.75	0.39	6.48	0.50	0.00	0.02	98.75
T688	106	94BCW313	till	0.25-0.5	pl green	olivine	39.96	0.03	0.01	0.07	8.48	0.13	50.20	0.05	0.00	0.00	98.93
T688	107	94BCW313	till	0.25-0.5	pl green	olivine	39.52	0.03	0.04	0.06	9.03	0.14	50.25	0.06	0.00	0.02	99.14
T688	108	94BCW313	till	0.25-0.5	pl green	enstatite	55.79	0.00	1.71	0.48	4.66	0.13	35.14	0.64	0.00	0.00	98.54
T688	109	94BCW313	till	0.25-0.5	pl green	olivine	36.02	0.03	0.34	0.02	8.51	0.11	44.57	0.02	0.42	0.00	90.04
T688	110	94BCW313	till	0.25-0.5	pl green	olivine	40.23	0.00	0.04	0.05	10.14	0.09	48.73	0.04	0.01	0.01	99.34
T688	111	94BCW313	till	0.25-0.5	pl green	enstatite	57.38	0.13	0.29	0.34	4.45	0.13	36.24	0.37	0.09	0.01	99.43
T688	112	94BCW313	till	0.25-0.5	black	ilmenite	0.01	49.81	0.04	0.03	47.42	2.68	0.07	0.01	0.00	0.00	100.06
T688	113	94BCW313	till	0.25-0.5	black	chromite*	0.14	0.05	3.98	62.14	22.25	0.37	10.19	0.03	0.00	0.00	99.14
T689	1	94BCW313	till	0.25-0.5	orange	almandine	36.49	0.15	20.59	0.01	28.99	1.31	2.91	7.99	0.00	0.00	98.44
T689	2	94BCW313	till	0.25-0.5	orange	almandine	37.92	0.00	20.84	0.03	27.92	0.50	3.40	9.01	0.00	0.00	99.61
T689	3	94BCW313	till	0.25-0.5	orange	almandine	37.22	0.02	20.58	0.01	28.45	0.75	2.62	8.72	0.00	0.00	98.37
T689	4	94BCW313	till	0.25-0.5	orange	almandine	38.63	0.00	21.14	0.13	23.51	0.92	7.66	7.40	0.00	0.00	99.41
T689	5	94BCW313	till	0.25-0.5	orange	almandine	36.82	0.03	20.44	0.03	28.72	0.43	1.85	10.33	0.00	0.00	98.64
T689	6	94BCW313	till	0.25-0.5	orange	almandine	37.38	0.04	20.38	0.06	24.94	2.68	1.96	11.50	0.02	0.01	98.97
T689	7	94BCW313	till	0.25-0.5	orange	almandine	37.67	0.10	20.53	0.06	23.05	2.85	1.67	12.94	0.01	0.00	98.88
T689	8	94BCW313	till	0.25-0.5	orange	staurolite	27.32	0.70	52.59	0.09	12.91	0.43	1.70	0.03	0.02	0.00	95.79
T689	9	94BCW313	till	0.25-0.5	orange	almandine	36.63	0.00	20.44	0.03	28.01	0.84	2.91	9.12	0.00	0.00	97.98
T689	10	94BCW313	till	0.25-0.5	orange	staurolite	27.92	0.73	52.24	0.06	12.84	0.09	2.54	0.02	0.00	0.01	96.45
T689	11	94BCW313	till	0.25-0.5	pl green	enstatite	56.22	0.00	0.56	0.40	4.77	0.13	34.99	0.57	0.12	0.00	97.75
T689	12	94BCW313	till	0.25-0.5	green	Cr-diopside	52.28	0.16	1.33	0.67	6.21	0.15	16.02	21.42	0.55	0.01	98.80
T689	13	94BCW313	till	0.25-0.5	green	Cr-diopside	53.93	0.21	1.23	1.14	2.51	0.08	17.26	21.19	1.06	0.05	98.64
T689	14	94BCW313	till	0.25-0.5	green	HiCr-diopsid	51.78	0.02	1.29	1.63	2.46	0.12	18.32	19.65	1.20	0.06	96.53
T689	15	94BCW313	till	0.25-0.5	green	Cr-diopside	53.00	0.17	1.58	1.08	2.92	0.09	17.05	19.87	1.03	0.07	96.87
T689	16	94BCW313	till	0.25-0.5	green	Cr-diopside	53.27	0.29	1.97	0.73	2.82	0.16	17.10	19.63	1.53	0.04	97.53
T689	17	94BCW313	till	0.25-0.5	green	Cr-diopside	53.65	0.13	1.59	1.22	2.58	0.12	17.21	20.52	1.11	0.06	98.17
T689	18	94BCW313	till	0.25-0.5	green	Cr-diopside	53.93	0.14	1.64	1.30	2.60	0.11	17.17	20.38	1.31	0.06	98.64
T689	19	94BCW313	till	0.25-0.5	green	Cr-diopside	53.51	0.13	1.54	1.22	2.60	0.14	17.19	19.91	1.25	0.06	97.53
T689	20	94BCW313	till	0.25-0.5	green	Cr-diopside	54.15	0.12	1.32	1.10	2.47	0.11	17.59	20.55	1.01	0.08	98.49
T689	21	94BCW313	till	0.25-0.5	green	Cr-diopside	52.85	0.08	1.28	1.10	2.53	0.11	17.53	20.84	1.00	0.06	97.37
T689	22	94BCW313	till	0.25-0.5	green	Cr-diopside	53.25	0.04	1.40	1.32	2.65	0.15	18.08	19.84	1.15	0.05	97.93
T689	23	94BCW313	till	0.25-0.5	green	Cr-diopside	52.79	0.08	1.60	1.26	2.61	0.09	17.09	19.98	1.30	0.06	96.86
T689	24	94BCW313	till	0.25-0.5	green	Cr-diopside	54.59	0.19	1.29	1.06	2.58	0.09	17.62	21.35	1.02	0.06	99.86
T689	25	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.75	0.20	1.14	2.68	2.20	0.12	16.22	20.28	1.51	0.07	97.18
T689	26	94BCW313	till	0.25-0.5	green	Cr-diopside	54.11	0.00	1.24	1.18	2.61	0.10	17.74	20.46	1.01	0.06	98.51
T689	27	94BCW313	till	0.25-0.5	green	Cr-diopside	53.60	0.17	0.65	0.59	3.07	0.12	17.25	22.11	0.75	0.11	98.42
T689	28	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.25	0.19	1.41	2.71	2.30	0.07	16.21	20.06	1.49	0.06	97.74
T689	29	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.64	0.04	1.69	2.82	2.24	0.08	16.58	18.98	2.13	0.05	98.24
T689	30	94BCW313	till	0.25-0.5	green	Cr-diopside	53.37	0.21	1.20	1.10	2.62	0.12	17.95	20.21	0.98	0.05	97.81
T689	31	94BCW313	till	0.25-0.5	green	Cr-diopside	53.23	0.13	1.27	1.05	2.62	0.10	17.86	20.00	0.99	0.05	97.29
T689	32	94BCW313	till	0.25-0.5	green	Cr-diopside	52.30	0.10	1.59	1.25	2.58	0.13	17.27	19.82	1.29	0.05	96.37
T689	33	94BCW313	till	0.25-0.5	green	Cr-diopside	53.60	0.23	1.40	1.32	2.38	0.13	16.83	20.83	1.37	0.03	98.10
T689	34	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.89	0.27	0.83	2.61	1.90	0.11	16.66	21.55	1.37	0.04	98.22
T689	35	94BCW313	till	0.25-0.5	green	Cr-diopside	52.92	0.20	1.34	1.30	2.55	0.11	17.20	20.82	1.19	0.07	97.60
T689	36	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.36	0.23	0.40	2.02	2.13	0.05	16.41	22.13	1.12	0.04	97.88

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T689	37	94BCW313	till	0.25-0.5	green	Cr-diopside	53.25	0.17	1.78	0.60	2.93	0.08	17.04	20.04	1.39	0.01	97.29
T689	38	94BCW313	till	0.25-0.5	green	Cr-diopside	53.53	0.22	1.65	0.79	2.65	0.09	16.84	20.14	1.43	0.04	97.38
T689	39	94BCW313	till	0.25-0.5	green	Cr-diopside	52.80	0.17	0.95	1.30	2.42	0.06	16.96	21.70	1.03	0.03	97.41
T689	40	94BCW313	till	0.25-0.5	green	Cr-diopside	53.71	0.17	1.57	1.31	2.51	0.14	17.50	20.41	1.24	0.05	98.61
T689	41	94BCW313	till	0.25-0.5	green	Cr-diopside	52.75	0.15	1.62	1.49	2.53	0.09	17.02	20.31	1.38	0.06	97.39
T689	42	94BCW313	till	0.25-0.5	green	Cr-diopside	54.98	0.18	1.56	1.39	2.35	0.06	17.09	20.23	1.31	0.09	99.25
T689	43	94BCW313	till	0.25-0.5	green	Cr-diopside	53.73	0.12	1.60	1.42	2.57	0.06	17.22	20.28	1.22	0.03	98.24
T689	44	94BCW313	till	0.25-0.5	green	Cr-diopside	54.17	0.19	1.27	0.88	2.73	0.12	17.82	20.02	0.99	0.05	98.24
T689	45	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.88	0.21	0.70	1.56	2.28	0.07	17.25	22.12	1.04	0.03	99.14
T689	46	94BCW313	till	0.25-0.5	green	Cr-diopside	52.91	0.00	0.65	0.91	3.27	0.17	17.67	21.63	0.62	0.04	97.86
T689	47	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.87	0.18	1.42	2.14	2.21	0.07	16.72	20.53	1.56	0.04	98.75
T689	48	94BCW313	till	0.25-0.5	green	Cr-diopside	53.62	0.16	1.57	1.18	2.65	0.09	17.59	20.16	1.25	0.05	98.32
T689	49	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.34	0.31	1.28	2.32	1.89	0.08	16.71	19.79	1.44	0.06	96.22
T689	50	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.55	0.00	1.44	3.16	1.97	0.10	16.69	19.42	1.95	0.01	98.28
T689	51	94BCW313	till	0.25-0.5	green	Cr-diopside	54.33	0.12	1.28	1.12	2.36	0.11	17.52	21.18	1.02	0.06	99.09
T689	52	94BCW313	till	0.25-0.5	green	Cr-diopside	53.28	0.09	1.17	0.61	3.63	0.16	17.05	20.71	1.10	0.04	97.83
T689	53	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.52	0.21	1.98	2.33	2.50	0.12	16.45	18.66	2.03	0.02	97.81
T689	54	94BCW313	till	0.25-0.5	green	Cr-diopside	53.60	0.13	1.29	1.16	2.59	0.09	17.56	20.93	1.00	0.06	98.39
T689	55	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.84	0.10	1.02	3.70	2.01	0.13	16.13	19.02	1.98	0.05	97.97
T689	56	94BCW313	till	0.25-0.5	green	Cr-diopside	53.42	0.15	1.58	1.35	2.59	0.13	17.41	19.88	1.30	0.10	97.89
T689	57	94BCW313	till	0.25-0.5	green	Cr-diopside	52.86	0.07	1.28	1.09	2.58	0.07	17.74	20.54	1.02	0.07	97.32
T689	58	94BCW313	till	0.25-0.5	green	HiCr-diopsid	54.23	0.16	2.08	2.44	2.36	0.10	16.20	18.60	2.14	0.02	98.32
T689	59	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.67	0.17	1.45	1.68	2.56	0.11	16.57	20.00	1.51	0.03	96.75
T689	60	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.93	0.26	1.35	1.52	2.42	0.11	17.16	20.11	1.43	0.04	97.33
T689	61	94BCW313	till	0.25-0.5	green	Cr-diopside	53.15	0.14	1.35	1.26	2.63	0.08	17.42	20.50	1.12	0.07	97.71
T689	62	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.70	0.25	1.12	1.54	2.33	0.09	16.99	21.13	1.21	0.04	98.39
T689	63	94BCW313	till	0.25-0.5	green	Cr-diopside	52.92	0.12	1.33	1.25	2.57	0.07	17.08	21.15	1.07	0.06	97.61
T689	64	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.00	0.29	1.43	1.79	2.57	0.10	16.70	20.06	1.58	0.04	97.55
T689	65	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.96	0.24	1.30	2.15	2.31	0.09	16.84	20.28	1.60	0.05	97.80
T689	66	94BCW313	till	0.25-0.5	green	Cr-diopside	53.10	0.17	1.57	1.18	2.56	0.10	17.03	20.68	1.28	0.05	97.71
T689	67	94BCW313	till	0.25-0.5	green	Cr-diopside	54.16	0.19	1.26	0.95	3.00	0.12	18.23	19.54	1.13	0.05	98.63
T689	68	94BCW313	till	0.25-0.5	green	Cr-diopside	54.15	0.30	1.33	0.98	2.68	0.09	17.36	21.40	1.07	0.04	99.40
T689	69	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.45	0.12	1.43	2.49	2.45	0.08	16.16	19.50	1.97	0.03	96.68
T689	70	94BCW313	till	0.25-0.5	green	Cr-diopside	53.56	0.22	1.41	1.23	2.49	0.11	17.43	20.79	1.16	0.06	98.46
T689	71	94BCW313	till	0.25-0.5	green	Cr-diopside	53.62	0.15	1.52	1.07	2.73	0.11	17.37	20.49	1.15	0.05	98.26
T689	72	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.48	0.01	1.04	3.50	2.02	0.11	16.06	19.33	2.00	0.04	97.59
T689	73	94BCW313	till	0.25-0.5	green	Cr-diopside	53.97	0.08	1.62	1.38	2.63	0.12	16.79	20.03	1.33	0.05	98.00
T689	74	94BCW313	till	0.25-0.5	green	Cr-diopside	53.42	0.15	1.36	1.09	2.55	0.08	17.90	20.40	1.15	0.06	98.15
T689	75	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.57	0.18	1.59	2.15	2.37	0.13	17.42	19.19	1.57	0.07	98.22
T689	76	94BCW313	till	0.25-0.5	green	Cr-diopside	53.79	0.14	1.64	1.33	2.53	0.07	16.95	20.77	1.38	0.05	98.66
T689	77	94BCW313	till	0.25-0.5	green	Cr-diopside	53.56	0.04	1.60	1.33	2.44	0.09	16.98	20.08	1.36	0.07	97.53
T689	78	94BCW313	till	0.25-0.5	green	Cr-diopside	53.30	0.08	1.58	1.25	2.59	0.10	17.12	20.13	1.29	0.05	97.48
T689	79	94BCW313	till	0.25-0.5	green	Cr-diopside	53.05	0.16	1.37	1.28	2.55	0.09	16.80	20.77	1.24	0.06	97.37
T689	80	94BCW313	till	0.25-0.5	green	Cr-diopside	53.54	0.16	1.61	1.29	2.58	0.11	16.81	20.21	1.34	0.05	97.70
T689	81	94BCW313	till	0.25-0.5	green	HiCr-diopsid	52.25	0.20	2.00	2.91	2.22	0.11	16.24	18.23	2.25	0.04	96.43
T689	82	94BCW313	till	0.25-0.5	green	Cr-diopside	53.65	0.11	1.50	1.18	2.54	0.08	17.49	20.31	1.09	0.04	97.97
T689	83	94BCW313	till	0.25-0.5	green	Cr-diopside	53.33	0.06	1.56	1.29	2.52	0.09	17.81	19.54	1.25	0.05	97.51
T689	84	94BCW313	till	0.25-0.5	green	Cr-diopside	54.11	0.09	1.24	1.17	2.49	0.08	17.85	20.36	1.04	0.06	98.48
T689	85	94BCW313	till	0.25-0.5	green	HiCr-diopsid	51.99	0.23	1.24	1.59	2.47	0.08	16.34	20.26	1.12	0.05	95.34
T689	86	94BCW313	till	0.25-0.5	green	Cr-diopside	53.92	0.10	1.32	1.13	2.49	0.13	17.19	20.65	1.01	0.04	97.98
T689	87	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.74	0.15	1.62	2.90	2.61	0.10	16.41	18.61	2.16	0.05	98.34
T689	88	94BCW313	till	0.25-0.5	green	Cr-diopside	53.36	0.18	1.59	1.22	2.56	0.11	17.32	20.20	1.28	0.06	97.87

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	Al2O3	Cr2O	FeO	MnO	MgO	CaO	Na2O	K2O	TOTAL
T689	89	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.06	0.03	2.42	2.25	2.08	0.12	15.52	19.51	2.31	0.01	97.30
T689	90	94BCW313	till	0.25-0.5	green	Cr-diopside	53.68	0.35	1.58	0.98	2.67	0.11	16.86	19.94	1.44	0.01	97.62
T689	91	94BCW313	till	0.25-0.5	green	Cr-diopside	54.74	0.01	1.55	1.25	2.59	0.13	17.48	20.37	1.21	0.06	99.39
T689	92	94BCW313	till	0.25-0.5	green	Cr-diopside	53.62	0.09	1.58	1.34	2.42	0.10	17.00	20.52	1.32	0.03	98.01
T689	93	94BCW313	till	0.25-0.5	green	Cr-diopside	52.68	0.20	1.50	1.24	2.53	0.12	17.24	20.24	1.27	0.06	97.08
T689	94	94BCW313	till	0.25-0.5	green	Cr-diopside	54.11	0.18	1.63	1.30	2.58	0.10	17.40	20.27	1.31	0.04	98.91
T689	95	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.33	0.22	1.09	2.15	1.83	0.04	17.07	20.39	1.20	0.12	97.44
T689	96	94BCW313	till	0.25-0.5	green	Cr-diopside	53.89	0.17	1.50	1.19	2.64	0.09	17.48	20.40	1.17	0.07	98.59
T689	97	94BCW313	till	0.25-0.5	green	Cr-diopside	54.70	0.20	1.36	0.90	2.67	0.08	17.11	20.88	1.09	0.05	99.04
T689	98	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.00	0.18	1.36	2.03	3.41	0.10	16.04	19.78	1.68	0.05	97.63
T689	99	94BCW313	till	0.25-0.5	green	Cr-diopside	52.34	0.10	1.48	1.01	2.96	0.12	17.34	19.92	1.21	0.04	96.51
T689	100	94BCW313	till	0.25-0.5	green	Cr-diopside	53.91	0.15	0.79	0.51	2.63	0.06	17.29	22.85	0.78	0.02	98.99
T689	101	94BCW313	till	0.25-0.5	green	HiCr-diopsid	51.69	0.18	1.17	3.06	2.53	0.15	14.92	19.15	1.62	0.13	94.61
T689	102	94BCW313	till	0.25-0.5	green	Cr-diopside	53.55	0.13	1.38	0.93	2.59	0.11	17.81	20.73	1.08	0.05	98.35
T689	103	94BCW313	till	0.25-0.5	green	Cr-diopside	53.65	0.19	1.67	1.37	2.65	0.10	16.73	20.11	1.59	0.04	98.10
T689	104	94BCW313	till	0.25-0.5	green	Cr-diopside	53.99	0.08	1.56	1.30	2.56	0.16	16.85	20.43	1.29	0.06	98.27
T689	105	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.60	0.22	1.18	2.15	2.42	0.08	16.61	20.14	1.64	0.04	98.07
T689	106	94BCW313	till	0.25-0.5	green	Cr-diopside	53.56	0.20	0.71	1.22	2.37	0.08	17.40	22.68	0.94	0.04	99.19
T689	107	94BCW313	till	0.25-0.5	green	Cr-diopside	52.77	0.21	0.91	0.76	2.60	0.12	17.02	21.77	0.89	0.02	97.06
T689	108	94BCW313	till	0.25-0.5	green	Cr-diopside	53.92	0.21	0.74	1.16	2.31	0.08	17.05	22.08	0.94	0.03	98.51
T689	109	94BCW313	till	0.25-0.5	green	Cr-diopside	51.94	0.12	1.53	0.91	5.25	0.23	15.70	21.65	0.53	0.00	97.84
T689	110	94BCW313	till	0.25-0.5	green	Cr-diopside	53.70	0.24	1.34	0.90	3.10	0.12	17.65	20.38	1.12	0.06	98.61
T689	111	94BCW313	till	0.25-0.5	green	HiCr-diopsid	54.14	0.28	1.54	2.65	2.46	0.14	16.61	19.24	1.88	0.06	98.99
T689	112	94BCW313	till	0.25-0.5	green	Cr-diopside	53.19	0.22	1.70	1.33	2.46	0.06	17.29	19.83	1.36	0.04	97.47
T689	113	94BCW313	till	0.25-0.5	green	Cr-diopside	53.03	0.11	1.33	1.00	2.40	0.11	18.14	20.50	1.04	0.04	97.70
T689	114	94BCW313	till	0.25-0.5	green	Cr-diopside	53.71	0.08	1.37	1.08	2.40	0.10	17.32	20.99	1.09	0.08	98.21
T689	115	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.34	0.18	1.54	2.24	2.77	0.13	16.68	19.32	1.76	0.05	98.01
T689	116	94BCW313	till	0.25-0.5	green	Cr-diopside	52.45	0.14	1.56	1.20	2.74	0.07	17.58	20.26	1.22	0.06	97.25
T689	117	94BCW313	till	0.25-0.5	green	Cr-diopside	54.04	0.14	0.78	1.26	2.29	0.09	17.05	21.80	0.88	0.08	98.40
T689	118	94BCW313	till	0.25-0.5	green	Cr-diopside	53.87	0.20	1.33	1.13	2.51	0.09	17.21	20.93	1.10	0.05	98.42
T689	119	94BCW313	till	0.25-0.5	green	Cr-diopside	52.70	0.23	0.86	1.19	2.44	0.08	17.46	22.07	1.03	0.04	98.10
T689	120	94BCW313	till	0.25-0.5	green	Cr-diopside	53.13	0.25	1.39	0.72	2.93	0.09	17.19	20.92	1.07	0.05	97.73
T689	121	94BCW313	till	0.25-0.5	green	HiCr-diopsid	53.76	0.23	1.32	2.09	2.52	0.11	16.43	20.48	1.62	0.05	98.60
T689	122	94BCW313	till	0.25-0.5	green	Cr-diopside	53.38	0.10	1.34	1.20	2.55	0.13	17.55	20.92	1.10	0.06	98.33
T689	123	94BCW313	till	0.25-0.5	green	Cr-diopside	53.69	0.17	1.22	1.21	2.69	0.14	17.56	20.25	1.07	0.06	98.07
T689	124	94BCW313	till	0.25-0.5	green	Cr-diopside	53.18	0.13	1.44	1.29	2.53	0.06	17.51	20.26	1.17	0.07	97.65
T689	125	94BCW313	till	0.25-0.5	green	Cr-diopside	53.59	0.40	1.26	1.45	2.34	0.08	17.19	21.06	1.17	0.06	98.61
T689	126	94BCW313	till	0.25-0.5	green	Cr-diopside	52.91	0.29	1.20	0.82	2.46	0.09	17.42	21.08	1.13	0.03	97.42
T707	1	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.37	0.00	18.49	6.53	9.89	0.68	18.30	5.89	0.00	0.01	101.16
T707	2	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.48	0.05	17.90	7.42	7.13	0.46	20.72	5.87	0.00	0.00	101.04
T707	3	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.54	0.29	19.35	5.38	6.96	0.27	21.24	4.95	0.02	0.02	100.03
T707	4	94BCW313	till	0.5-0.84	purple	Cr-pyrope	42.39	0.40	18.40	6.78	7.28	0.38	20.89	5.53	0.03	0.00	102.07
T707	5	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.56	0.00	18.92	6.33	7.50	0.37	20.11	6.02	0.00	0.01	100.84
T707	6	94BCW313	till	0.5-0.84	purple	Cr-pyrope	40.90	0.02	17.37	8.46	6.87	0.43	19.82	6.78	0.00	0.00	100.63
T707	7	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.64	0.59	17.34	6.92	8.10	0.41	20.57	5.84	0.04	0.01	101.43
T707	8	94BCW313	till	0.5-0.84	purple	Cr-pyrope	40.96	0.41	18.37	5.79	8.34	0.44	19.74	6.11	0.05	0.08	100.28
T707	9	94BCW313	till	0.5-0.84	purple	Cr-pyrope	40.72	0.46	19.00	5.41	7.59	0.39	21.25	5.26	0.03	0.00	100.11
T707	10	94BCW313	till	0.5-0.84	purple	Cr-pyrope	40.76	0.36	19.12	5.00	8.70	0.43	18.91	6.80	0.00	0.01	100.10
T707	11	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.11	0.34	18.74	5.70	7.48	0.37	21.55	4.93	0.05	0.00	100.28
T707	12	94BCW313	till	0.5-0.84	purple	Cr-pyrope	41.52	0.26	19.97	3.76	7.79	0.38	21.28	4.92	0.02	0.00	99.90
T707	13	94BCW313	till	0.5-0.84	orange	almandine	37.59	0.10	21.01	0.04	28.70	1.49	6.30	5.13	0.04	0.01	100.41
T707	14	94BCW313	till	0.5-0.84	orange	almandine	37.87	0.10	20.92	0.04	23.97	2.03	2.22	13.12	0.00	0.02	100.29

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T707	15	94BCW313	till	0.5-0.84	orange	almandine	36.80	0.00	21.10	0.04	30.59	1.10	4.42	5.81	0.00	0.00	99.87
T707	16	94BCW313	till	0.5-0.84	orange	almandine	37.41	0.11	21.20	0.05	28.60	1.19	6.02	5.61	0.00	0.02	100.19
T707	17	94BCW313	till	0.5-0.84	orange	almandine	37.49	0.06	20.82	0.03	28.75	0.51	2.51	10.55	0.00	0.00	100.72
T707	18	94BCW313	till	0.5-0.84	green	Cr-diopside	54.11	0.14	1.33	1.13	2.66	0.09	18.26	20.99	1.05	0.07	99.82
T707	19	94BCW313	till	0.5-0.84	green	HiCr-diopsid	54.16	0.28	1.94	2.86	2.62	0.16	16.62	18.36	2.31	0.03	99.34
T707	20	94BCW313	till	0.5-0.84	green	Cr-diopside	54.29	0.21	1.46	1.21	2.97	0.13	18.72	19.54	1.23	0.03	99.79
T707	21	94BCW313	till	0.5-0.84	green	Cr-diopside	55.06	0.13	1.32	1.16	2.73	0.12	18.37	20.17	1.13	0.07	100.26
T707	22	94BCW313	till	0.5-0.84	green	HiCr-diopsid	54.71	0.18	1.38	1.65	2.44	0.11	17.81	20.77	1.28	0.07	100.40
T707	23	94BCW313	till	0.5-0.84	green	enstatite	57.71	0.11	0.61	0.49	4.15	0.13	35.21	0.33	0.12	0.01	98.86
T707	24	94BCW313	till	0.5-0.84	green	Cr-diopside	54.72	0.21	1.71	1.38	2.57	0.13	17.67	20.06	1.34	0.05	99.81
T707	25	94BCW313	till	0.5-0.84	green	Cr-diopside	55.22	0.25	1.47	1.24	2.74	0.13	17.73	20.71	1.29	0.06	100.84
T707	26	94BCW313	till	0.5-0.84	green	HiCr-diopsid	54.49	0.18	0.86	1.99	2.20	0.09	17.31	21.87	1.25	0.01	100.24
T707	27	94BCW313	till	0.5-0.84	green	HiCr-diopsid	56.03	0.22	1.33	0.93	2.77	0.09	17.72	20.96	1.11	0.08	101.22
T707	28	94BCW313	till	0.5-0.84	green	Cr-diopside	53.94	0.15	1.18	1.12	2.66	0.10	18.60	20.62	1.03	0.06	99.44
T707	29	94BCW313	till	0.5-0.84	green	Cr-diopside	53.47	0.13	1.16	1.09	2.76	0.11	17.68	19.82	0.99	0.07	97.28
T707	30	94BCW313	till	0.5-0.84	green	Cr-diopside	53.92	0.14	1.36	1.25	2.76	0.08	18.39	20.68	1.11	0.05	99.74
T707	31	94BCW313	till	0.5-0.84	green	Cr-diopside	53.89	0.22	1.81	1.42	2.80	0.13	17.58	19.92	1.67	0.04	99.48
T707	32	94BCW313	till	0.5-0.84	green	HiCr-diopsid	54.00	0.20	0.78	1.63	2.33	0.05	17.86	22.67	1.08	0.04	100.63
T707	33	94BCW313	till	0.5-0.84	pl green	enstatite	56.58	0.06	2.56	0.60	4.44	0.08	35.67	0.72	0.01	0.00	100.72
T707	34	94BCW313	till	0.5-0.84	pl green	enstatite	56.36	0.03	0.57	0.36	4.92	0.10	36.17	0.56	0.13	0.01	99.21
T707	35	94BCW313	till	0.5-0.84	pl green	enstatite	56.20	0.02	2.28	0.59	4.69	0.14	35.87	0.43	0.00	0.00	100.22
T707	5b	94BCW313	till	0.5-0.84	purple	Cr-pyrope	40.92	0.05	19.11	6.44	7.48	0.42	20.41	5.90	0.00	0.01	100.73
T666	33	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.99	0.03	17.82	8.58	6.99	0.47	20.89	5.22	0.00	0.01	101.00
T666	34	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.65	0.32	17.12	8.32	7.23	0.39	20.05	6.06	0.07	0.00	100.20
T666	35	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.81	0.03	19.15	7.37	7.44	0.51	22.90	2.36	0.00	0.01	101.58
T666	36	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.61	0.07	17.56	8.34	6.99	0.36	19.43	6.60	0.00	0.01	99.97
T666	37	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.76	0.01	19.83	5.87	6.90	0.40	22.06	3.72	0.00	0.00	100.55
T666	38	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.98	0.41	17.17	8.26	7.02	0.42	19.87	6.25	0.01	0.00	100.38
T666	39	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.63	0.07	16.29	9.68	7.16	0.37	19.58	6.60	0.01	0.01	100.41
T666	40	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.27	0.04	20.40	4.86	7.85	0.43	20.50	5.24	0.03	0.01	100.62
T666	41	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.91	0.05	18.94	6.67	7.51	0.46	20.04	6.22	0.02	0.00	100.82
T666	42	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.51	0.00	19.74	5.95	7.35	0.45	20.05	5.92	0.00	0.00	100.97
T666	43	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.51	0.08	17.27	8.78	7.63	0.51	19.06	6.73	0.01	0.01	100.58
T666	44	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.90	0.47	16.87	8.55	6.20	0.36	20.59	5.96	0.06	0.01	99.95
T666	45	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.31	0.33	18.52	6.76	8.29	0.43	19.57	6.35	0.02	0.00	101.59
T666	46	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.37	0.41	17.09	8.32	7.23	0.38	20.01	6.57	0.01	0.01	101.40
T666	47	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.87	0.33	18.90	6.00	7.67	0.35	20.69	5.81	0.01	0.02	101.65
T666	48	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.59	0.33	19.97	4.64	7.97	0.37	20.57	5.64	0.00	0.00	101.07
T666	49	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.60	0.04	18.12	8.30	7.11	0.42	19.89	6.77	0.00	0.00	102.24
T666	50	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.69	0.02	19.07	7.14	7.59	0.54	19.66	6.18	0.00	0.00	101.89
T666	51	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.42	0.49	17.92	7.54	7.09	0.37	20.36	6.20	0.03	0.00	101.41
T666	52	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.00	0.22	18.78	6.11	7.70	0.37	20.23	5.80	0.00	0.00	100.20
T666	53	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.63	0.06	19.70	6.03	8.00	0.39	19.84	6.48	0.01	0.00	102.14
T666	54	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.79	0.21	18.76	6.20	7.68	0.40	19.33	7.77	0.02	0.00	102.15
T666	55	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.73	0.72	18.75	5.94	8.13	0.41	19.36	6.62	0.06	0.00	101.72
T666	56	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.43	0.49	18.71	6.12	8.16	0.40	19.48	6.89	0.03	0.00	101.69
T666	57	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.91	0.25	20.59	4.33	7.75	0.38	21.32	4.76	0.04	0.01	101.33
T666	58	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.96	0.24	20.05	4.86	7.88	0.37	20.44	6.00	0.04	0.02	101.84
T666	59	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.32	0.40	19.38	5.18	8.55	0.48	19.00	7.22	0.01	0.00	101.53
T666	60	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.82	0.22	18.52	6.48	7.52	0.41	20.12	5.95	0.02	0.00	101.05
T666	61	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.72	0.60	19.92	4.19	7.45	0.32	21.22	5.14	0.06	0.01	100.62
T666	62	94BCW314	till	0.25-0.5	purple	Cr-pyrope	39.19	0.11	17.55	6.46	13.50	0.73	15.17	6.87	0.00	0.00	99.59

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	63	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.80	0.35	19.90	4.48	7.95	0.38	19.57	5.95	0.04	0.28	99.68
T666	64	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.37	0.39	19.73	4.87	8.25	0.37	19.80	6.25	0.05	0.01	101.09
T666	65	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.63	0.31	20.63	3.69	7.76	0.32	21.51	5.01	0.03	0.03	100.91
T666	66	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.94	0.38	19.70	4.72	8.68	0.43	18.62	7.14	0.01	0.01	100.63
T666	67	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.18	0.21	18.25	7.05	7.09	0.39	20.69	5.73	0.01	0.00	100.58
T666	68	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.44	0.26	20.21	4.10	7.38	0.36	21.56	4.95	0.04	0.00	100.30
T666	69	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.58	0.02	19.74	6.21	7.07	0.47	22.26	3.21	0.00	0.01	100.57
T666	70	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.22	0.17	19.19	6.05	7.27	0.39	20.98	5.31	0.02	0.01	100.62
T666	71	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.68	0.22	19.49	5.12	7.50	0.38	20.64	5.44	0.01	0.01	99.51
T666	72	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.86	0.20	19.09	5.26	12.18	0.68	16.75	6.86	0.00	0.01	101.88
T666	73	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.35	0.52	20.26	4.60	7.36	0.44	21.34	4.97	0.08	0.01	100.92
T666	74	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.45	0.41	20.04	4.10	7.64	0.36	21.52	5.31	0.02	0.01	100.85
T666	75	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	18.86	6.33	7.69	0.35	20.41	5.84	0.03	0.00	101.45
T666	76	94BCW314	till	0.25-0.5	purple	almandine	37.13	0.04	21.31	0.06	33.39	4.64	3.48	0.97	0.03	0.01	101.05
T666	77	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.34	0.43	16.42	8.93	7.28	0.33	19.90	6.07	0.04	0.01	99.73
T666	78	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.48	0.39	18.32	7.17	6.85	0.37	20.96	5.74	0.06	0.02	101.35
T666	79	94BCW314	till	0.25-0.5	purple	Cr-pyrope	42.21	0.32	18.92	5.61	7.44	0.35	19.81	6.11	0.23	0.08	101.08
T666	80	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.59	0.76	16.70	8.30	8.79	0.47	18.36	7.27	0.05	0.02	101.30
T666	81	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.19	0.55	18.62	6.17	8.39	0.50	19.60	5.81	0.07	0.00	100.90
T666	82	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.90	0.00	17.59	8.23	6.76	0.44	20.11	6.21	0.04	0.01	100.29
T666	83	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.25	0.29	17.75	7.97	7.09	0.41	20.44	6.15	0.04	0.02	101.42
T666	84	94BCW314	till	0.25-0.5	purple	Cr-pyrope	41.55	0.40	20.18	4.47	7.97	0.36	20.33	6.18	0.02	0.01	101.48
T666	85	94BCW314	till	0.25-0.5	purple	Cr-pyrope	40.87	0.01	18.80	6.99	7.20	0.44	20.24	5.75	0.00	0.01	100.31
T666	86	94BCW314	till	0.25-0.5	orange	almandine	37.42	0.07	21.42	0.04	26.67	3.05	1.86	10.47	0.02	0.00	101.02
T666	87	94BCW314	till	0.25-0.5	orange	spessartine	35.38	0.16	20.04	0.00	12.77	30.58	0.08	0.23	0.01	0.00	99.25
T666	88	94BCW314	till	0.25-0.5	orange	almandine	37.85	0.18	21.47	0.01	26.72	2.87	2.83	9.42	0.00	0.00	101.35
T666	89	94BCW314	till	0.25-0.5	orange	almandine	37.73	0.07	21.60	0.02	29.32	0.33	2.87	9.49	0.00	0.00	101.43
T666	90	94BCW314	till	0.25-0.5	orange	almandine	37.30	0.08	21.22	0.03	27.93	1.93	1.84	10.00	0.00	0.01	100.34
T666	91	94BCW314	till	0.25-0.5	orange	almandine	37.25	0.09	21.47	0.03	27.05	1.86	1.89	11.26	0.00	0.00	100.91
T666	92	94BCW314	till	0.25-0.5	pl green	enstatite	57.53	0.02	0.35	0.29	4.51	0.13	36.62	0.33	0.10	0.00	99.89
T666	93	94BCW314	till	0.25-0.5	pl green	enstatite	56.44	0.04	0.59	0.30	4.76	0.12	35.91	0.46	0.09	0.00	98.70
T666	94	94BCW314	till	0.25-0.5	pl green	enstatite	57.29	0.04	0.54	0.21	5.37	0.16	35.75	0.68	0.10	0.00	100.12
T666	95	94BCW314	till	0.25-0.5	pl green	olivine	39.96	0.03	0.03	0.04	8.48	0.12	50.57	0.05	0.01	0.00	99.30
T666	96	94BCW314	till	0.25-0.5	pl green	enstatite	57.46	0.01	0.48	0.38	4.13	0.17	36.96	0.35	0.09	0.00	100.03
T666	97	94BCW314	till	0.25-0.5	pl green	enstatite	56.65	0.01	2.47	0.43	4.64	0.13	36.08	0.36	0.01	0.01	100.78
T666	98	94BCW314	till	0.25-0.5	black	chromite	0.76	0.58	1.68	66.28	18.60	0.39	11.81	0.03	0.04	0.02	100.19
T666	99	94BCW314	till	0.25-0.5	black	tourmaline	36.10	0.79	32.66	0.00	11.24	0.18	4.71	0.31	2.40	0.04	88.41
T666	100	94BCW314	till	0.25-0.5	colorless	??	5.89	0.00	0.03	0.01	0.17	0.00	0.02	0.07	0.22	0.04	6.45
T666	101	94BCW314	till	0.25-0.5	green	HiCr-diopsid	51.65	0.24	1.08	1.71	2.39	0.08	16.80	21.13	1.90	0.12	97.10
T666	102	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.14	0.27	1.39	1.82	2.37	0.11	17.31	20.95	1.79	0.05	100.21
T666	103	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.31	0.18	1.39	2.44	2.25	0.08	17.24	21.14	1.78	0.07	100.86
T666	104	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.63	0.18	1.68	1.51	2.42	0.12	17.96	21.00	1.63	0.05	101.18
T666	105	94BCW314	till	0.25-0.5	green	HiCr-diopsid	55.01	0.07	0.49	1.76	2.06	0.11	18.14	22.37	1.51	0.00	101.52
T666	106	94BCW314	till	0.25-0.5	green	HiCr-diopsid	53.74	0.25	1.40	1.86	2.35	0.07	17.11	20.97	1.78	0.02	99.55
T666	107	94BCW314	till	0.25-0.5	green	Cr-diopside	54.16	0.13	1.45	1.11	2.60	0.08	18.63	21.09	1.31	0.02	100.56
T666	108	94BCW314	till	0.25-0.5	green	Cr-diopside	53.93	0.27	2.01	0.52	3.41	0.08	17.42	21.17	1.69	0.04	100.54
T666	109	94BCW314	till	0.25-0.5	green	Cr-diopside	53.95	0.21	1.43	1.41	2.35	0.12	17.80	21.47	1.41	0.06	100.20
T666	110	94BCW314	till	0.25-0.5	green	HiCr-diopsid	55.36	0.28	1.68	2.53	2.63	0.12	17.92	19.47	2.23	0.03	102.25
T666	111	94BCW314	till	0.25-0.5	green	HiCr-diopsid	53.71	0.24	1.44	2.49	2.34	0.11	16.87	20.84	1.98	0.05	100.06
T666	112	94BCW314	till	0.25-0.5	green	Cr-diopside	53.56	0.21	1.35	1.35	2.53	0.13	17.63	21.77	1.36	0.05	99.93
T666	113	94BCW314	till	0.25-0.5	green	Cr-diopside	53.55	0.11	1.63	1.27	2.50	0.06	17.70	21.38	1.31	0.07	99.58
T666	114	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.34	0.31	1.73	2.06	2.53	0.11	17.43	20.23	1.97	0.06	100.76

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T666	115	94BCW314	till	0.25-0.5	green	Cr-diopside	53.04	0.19	2.32	1.23	2.75	0.11	17.07	19.26	2.03	0.04	98.04
T666	116	94BCW314	till	0.25-0.5	green	Cr-diopside	55.13	0.21	1.70	1.26	2.52	0.07	17.96	20.76	1.47	0.03	101.11
T666	117	94BCW314	till	0.25-0.5	green	Cr-diopside	54.01	0.14	1.66	1.30	2.67	0.10	18.21	19.97	1.56	0.06	99.68
T666	118	94BCW314	till	0.25-0.5	green	Cr-diopside	53.34	0.10	1.33	0.99	2.64	0.08	18.03	21.59	1.15	0.08	99.34
T666	119	94BCW314	till	0.25-0.5	green	Cr-diopside	55.11	0.16	1.91	1.18	2.68	0.13	18.08	20.05	1.52	0.04	100.85
T666	120	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.14	0.20	0.81	1.93	2.09	0.10	17.31	22.38	1.31	0.04	100.32
T666	121	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.16	0.25	2.06	3.44	2.39	0.11	16.21	18.47	2.99	0.02	100.10
T666	122	94BCW314	till	0.25-0.5	green	Cr-diopside	54.10	0.19	1.66	1.39	2.80	0.09	18.09	19.90	1.64	0.05	99.90
T666	123	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.58	0.05	1.32	1.84	2.49	0.12	18.85	19.99	1.58	0.07	100.88
T666	124	94BCW314	till	0.25-0.5	green	Cr-diopside	53.74	0.32	1.26	1.14	2.55	0.13	18.55	21.26	0.80	0.78	100.54
T666	125	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.68	0.19	1.95	2.06	2.67	0.09	17.66	19.66	2.14	0.05	101.14
T666	126	94BCW314	till	0.25-0.5	green	Cr-diopside	54.53	0.22	1.21	0.69	2.36	0.11	17.90	22.05	1.28	0.02	100.38
T666	127	94BCW314	till	0.25-0.5	green	Cr-diopside	53.68	0.12	1.39	1.12	2.62	0.16	18.35	21.09	1.25	0.06	99.84
T666	128	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.17	0.23	1.83	2.65	2.70	0.12	17.03	19.66	2.23	0.08	100.69
T666	129	94BCW314	till	0.25-0.5	green	Cr-diopside	54.01	0.16	1.56	1.29	2.52	0.10	18.02	20.99	1.49	0.05	100.19
T666	130	94BCW314	till	0.25-0.5	green	HiCr-diopsid	53.75	0.18	1.45	1.65	2.81	0.12	17.06	21.02	1.72	0.03	99.79
T666	131	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.21	0.15	1.74	3.40	2.41	0.13	16.74	18.81	2.51	0.05	100.14
T666	132	94BCW314	till	0.25-0.5	green	Cr-diopside	53.70	0.10	1.26	1.19	2.70	0.10	18.60	20.81	1.19	0.07	99.72
T666	133	94BCW314	till	0.25-0.5	green	Cr-diopside	57.89	0.22	1.53	0.76	2.25	0.11	18.91	18.94	1.42	0.04	102.08
T666	134	94BCW314	till	0.25-0.5	green	Cr-diopside	54.49	0.16	0.86	0.63	2.84	0.08	17.81	22.93	1.02	0.03	100.85
T666	135	94BCW314	till	0.25-0.5	green	Cr-diopside	53.93	0.16	1.67	1.38	2.53	0.11	17.67	20.89	1.58	0.05	99.97
T666	136	94BCW314	till	0.25-0.5	green	Cr-diopside	53.82	0.14	1.61	1.18	2.60	0.11	18.13	20.80	1.48	0.07	99.92
T666	137	94BCW314	till	0.25-0.5	green	Cr-diopside	53.98	0.08	1.50	1.18	2.63	0.11	18.33	20.75	1.49	0.08	100.13
T666	138	94BCW314	till	0.25-0.5	green	Cr-diopside	54.52	0.16	1.67	1.15	2.59	0.09	17.87	20.99	1.52	0.05	100.61
T666	139	94BCW314	till	0.25-0.5	green	Cr-diopside	54.24	0.07	1.32	1.05	2.66	0.14	18.39	21.11	1.22	0.06	100.27
T666	140	94BCW314	till	0.25-0.5	green	Cr-diopside	54.24	0.15	1.63	1.32	2.71	0.12	17.96	20.75	1.49	0.05	100.41
T666	141	94BCW314	till	0.25-0.5	green	Cr-diopside	53.50	0.13	1.44	1.16	2.68	0.05	17.68	21.33	1.24	0.06	99.27
T666	142	94BCW314	till	0.25-0.5	green	Cr-diopside	53.88	0.17	1.68	1.39	2.73	0.13	18.07	20.09	1.57	0.05	99.76
T666	143	94BCW314	till	0.25-0.5	green	Cr-diopside	53.99	0.19	1.69	1.26	2.63	0.11	17.63	20.96	1.58	0.05	100.09
T666	144	94BCW314	till	0.25-0.5	green	Cr-diopside	54.22	0.10	1.20	1.10	2.73	0.13	18.56	20.95	1.20	0.08	100.26
T666	145	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.30	0.20	1.66	1.50	2.48	0.12	17.74	20.81	1.68	0.05	100.55
T666	146	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.54	0.10	0.83	1.79	1.81	0.11	17.86	21.94	1.42	0.03	100.42
T666	147	94BCW314	till	0.25-0.5	green	HiCr-diopsid	53.97	0.22	1.36	1.86	2.44	0.12	17.00	21.12	1.77	0.04	99.89
T666	148	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.21	0.23	1.22	1.57	2.37	0.09	17.23	21.83	1.58	0.02	100.34
T666	149	94BCW314	till	0.25-0.5	green	Cr-diopside	53.72	0.11	1.57	1.23	2.52	0.08	17.93	20.73	1.51	0.08	99.48
T666	150	94BCW314	till	0.25-0.5	green	Cr-diopside	54.19	0.15	1.42	1.07	2.75	0.10	18.06	21.01	1.30	0.06	100.11
T666	151	94BCW314	till	0.25-0.5	green	Cr-diopside	53.84	0.10	1.57	1.22	2.54	0.08	18.03	21.24	1.37	0.06	100.03
T666	152	94BCW314	till	0.25-0.5	green	HiCr-diopsid	54.73	0.27	1.45	1.77	2.42	0.07	17.39	21.16	1.81	0.03	101.13
T666	153	94BCW314	till	0.25-0.5	green	Cr-diopside	54.26	0.14	1.52	1.03	2.85	0.11	18.54	20.32	1.31	0.08	100.15
T666	154	94BCW314	till	0.25-0.5	green	Cr-diopside	56.00	0.22	1.43	1.20	2.61	0.12	18.70	21.95	1.41	0.03	103.66
T666	155	94BCW314	till	0.25-0.5	green	HiCr-diopsid	52.72	0.16	2.11	2.28	2.38	0.09	15.02	17.37	2.30	0.03	94.47
T666	156	94BCW314	till	0.25-0.5	green	Cr-diopside	54.41	0.19	1.69	1.26	2.52	0.09	17.90	20.81	1.48	0.06	100.39
T666	157	94BCW314	till	0.25-0.5	green	*plucked*											
T666	158	94BCW314	till	0.25-0.5	green	Cr-diopside	54.16	0.07	1.45	1.48	2.45	0.13	18.08	21.38	1.29	0.08	100.57
T666	159	94BCW314	till	0.25-0.5	green	Cr-diopside	52.38	0.29	2.36	0.71	3.53	0.05	17.51	23.29	0.31	0.01	100.43
T666	160	94BCW314	till	0.25-0.5	green	Cr-diopside	54.04	0.22	1.44	0.87	3.10	0.16	18.49	20.83	1.22	0.04	100.41
T707	36	94BCW314	till	0.5-0.84	orange	Cr-pyrope	40.83	0.42	19.56	4.05	8.62	0.31	20.59	5.45	0.02	0.01	99.87
T707	37	94BCW314	till	0.5-0.84	purple	Cr-pyrope	41.68	0.11	19.76	4.64	7.86	0.41	21.00	5.37	0.00	0.01	100.84
T707	38	94BCW314	till	0.5-0.84	purple	Cr-pyrope	41.68	0.34	18.81	5.54	7.17	0.35	21.33	5.40	0.01	0.01	100.65
T707	39	94BCW314	till	0.5-0.84	purple	Cr-pyrope	40.75	0.11	17.58	8.05	7.12	0.34	19.63	6.52	0.00	0.00	100.09
T707	40	94BCW314	till	0.5-0.84	purple	Cr-pyrope	41.37	0.13	19.72	4.63	7.42	0.37	21.51	5.16	0.02	0.00	100.32
T707	41	94BCW314	till	0.5-0.84	purple	Cr-pyrope	41.83	0.16	21.35	2.58	8.66	0.55	21.83	4.33	0.04	0.01	101.34

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T707	42	94BCW314	till	0.5-0.84	black	Mg-ilmenite	0.00	52.32	0.39	5.56	29.58	0.35	12.55	0.02	0.00	0.00	100.77
T707	43	94BCW314	till	0.5-0.84	green	Cr-diopside	54.97	0.31	1.70	0.98	2.97	0.11	17.75	19.91	1.60	0.03	100.32
T707	44	94BCW314	till	0.5-0.84	green	Cr-diopside	54.83	0.10	1.29	1.20	2.62	0.11	18.20	20.42	1.13	0.06	99.96
T707	45	94BCW314	till	0.5-0.84	green	HiCr-diopsid	55.44	0.14	1.23	2.69	2.25	0.15	16.74	20.20	1.87	0.01	100.73
T707	46	94BCW314	till	0.5-0.84	green	HiCr-diopsid	54.41	0.24	1.76	1.94	2.64	0.10	17.14	19.85	1.80	0.05	99.91
T707	47	94BCW314	till	0.5-0.84	green	HiCr-diopsid	54.34	0.20	1.44	2.60	2.12	0.11	17.05	20.32	1.68	0.05	99.91
T707	48	94BCW314	till	0.5-0.84	green	Cr-diopside	53.40	0.11	1.63	1.09	2.82	0.10	18.20	19.92	1.11	0.05	98.42
T707	49	94BCW314	till	0.5-0.84	green	HiCr-diopsid	54.47	0.06	1.69	1.86	2.49	0.11	17.44	20.05	1.57	0.03	99.77
T707	50	94BCW314	till	0.5-0.84	green	Cr-diopside	54.72	0.22	1.66	1.35	2.68	0.07	17.45	20.76	1.35	0.03	100.28
T707	51	94BCW314	till	0.5-0.84	green	Cr-diopside	54.23	0.07	1.61	1.28	2.55	0.08	17.96	20.19	1.30	0.06	99.33
T707	52	94BCW314	till	0.5-0.84	pl green	enstatite	58.06	0.04	0.25	0.31	4.75	0.19	36.38	0.40	0.13	0.00	100.51
T690	1	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.30	0.05	18.77	6.50	7.54	0.45	19.83	6.11	0.00	0.01	100.56
T690	2	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.53	0.38	16.24	8.95	7.09	0.34	19.68	6.11	0.02	0.00	99.33
T690	3	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.60	0.03	17.37	8.54	6.66	0.44	20.90	4.85	0.00	0.01	100.41
T690	4	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.49	0.04	17.85	7.49	6.86	0.45	19.62	6.18	0.00	0.01	98.98
T690	5	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.88	0.00	19.09	6.12	7.40	0.47	20.66	5.34	0.00	0.00	99.96
T690	6	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.40	0.01	17.27	8.17	7.89	0.46	18.33	6.74	0.00	0.01	99.28
T690	7	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.73	0.13	20.21	4.13	6.80	0.41	21.33	4.79	0.01	0.02	99.56
T690	8	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.27	0.00	17.56	7.73	7.09	0.45	19.84	6.20	0.00	0.01	100.14
T690	9	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.44	0.05	17.24	8.77	7.51	0.47	21.61	3.29	0.00	0.01	99.38
T690	10	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.70	0.20	18.35	6.40	6.99	0.37	20.09	5.72	0.00	0.00	98.82
T690	11	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.55	0.28	16.96	8.23	6.82	0.36	20.54	5.93	0.02	0.03	99.73
T690	12	94BCW315	till	0.25-0.5	purple	Cr-pyrope	39.69	0.07	16.77	8.63	7.07	0.43	19.25	6.83	0.00	0.00	98.75
T690	13	94BCW315	till	0.25-0.5	purple	Cr-pyrope	39.98	0.32	16.35	8.31	7.28	0.43	19.48	6.00	0.02	0.04	98.20
T690	14	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.37	0.25	17.71	7.12	6.97	0.40	20.42	5.36	0.01	0.00	99.61
T690	15	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.08	0.03	18.16	6.83	6.97	0.42	19.81	5.86	0.00	0.02	99.18
T690	16	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.43	0.23	19.54	4.82	7.24	0.40	21.18	4.75	0.01	0.00	99.60
T690	17	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.26	0.00	18.06	7.35	7.23	0.44	21.78	3.46	0.02	0.01	99.61
T690	18	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.11	0.34	19.41	4.67	7.24	0.38	20.66	4.80	0.02	0.00	98.63
T690	19	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.52	0.48	18.54	5.28	7.20	0.33	20.78	5.35	0.03	0.00	99.51
T690	20	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.11	0.33	16.83	8.30	7.10	0.39	19.70	5.88	0.03	0.00	99.66
T690	21	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.74	0.13	19.05	4.92	7.39	0.38	20.49	5.26	0.00	0.01	99.36
T690	22	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.57	0.29	18.27	6.58	7.00	0.38	21.03	5.17	0.05	0.00	100.33
T690	23	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.45	0.21	20.77	3.28	7.79	0.33	21.79	4.45	0.01	0.00	100.08
T690	24	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.99	0.38	18.46	5.57	8.21	0.39	19.60	6.20	0.01	0.00	99.80
T690	25	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.60	0.36	20.17	3.72	8.59	0.43	20.68	4.58	0.03	0.00	100.15
T690	26	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.70	0.34	18.11	6.47	7.24	0.38	20.74	5.49	0.00	0.00	100.48
T690	27	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.71	0.23	20.50	3.64	7.59	0.39	21.64	4.54	0.02	0.01	100.27
T690	28	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.76	0.18	19.58	4.68	7.40	0.37	21.04	4.93	0.01	0.00	99.94
T690	29	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.46	0.00	18.64	6.35	7.06	0.38	20.00	5.83	0.00	0.01	99.72
T690	30	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.67	0.04	20.08	4.87	6.82	0.37	22.63	3.00	0.00	0.00	99.48
T690	31	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.19	0.24	18.25	6.05	7.69	0.42	20.37	5.53	0.02	0.00	99.76
T690	32	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.27	0.73	17.23	6.71	7.35	0.30	20.16	5.56	0.05	0.01	99.36
T690	33	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.79	0.43	20.34	3.57	7.56	0.45	21.23	4.30	0.05	0.02	98.72
T690	34	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.16	0.27	19.38	4.92	7.34	0.38	21.07	4.99	0.03	0.00	99.54
T690	35	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.81	0.37	18.74	5.13	8.45	0.41	19.04	6.40	0.00	0.01	99.35
T690	36	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.96	0.22	19.11	4.86	7.46	0.35	20.55	5.05	0.00	0.02	98.56
T690	37	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.33	0.10	20.69	3.44	7.82	0.44	20.90	4.55	0.00	0.00	99.27
T690	38	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.02	0.42	18.32	5.47	8.04	0.42	18.87	6.65	0.01	0.01	98.23
T690	39	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.60	0.19	19.29	5.18	7.12	0.42	21.32	4.72	0.03	0.01	98.88
T690	40	94BCW315	till	0.25-0.5	purple	Cr-pyrope	39.77	0.37	18.97	4.51	8.20	0.47	18.73	6.62	0.00	0.01	97.65
T690	41	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.19	0.32	15.87	9.13	6.74	0.38	19.67	6.22	0.01	0.00	98.52

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T690	42	94BCW315	till	0.25-0.5	red	Cr-pyrope	41.27	0.61	20.06	3.15	7.54	0.36	21.19	4.67	0.04	0.01	98.89
T690	43	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.24	0.36	19.68	3.88	7.24	0.37	21.19	4.81	0.02	0.02	98.82
T690	44	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.81	0.28	19.22	5.11	7.03	0.39	20.81	5.26	0.01	0.00	98.91
T690	45	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.54	0.00	18.16	6.77	7.93	0.57	19.29	5.63	0.02	0.01	98.93
T690	46	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.80	0.41	17.18	7.04	7.09	0.32	20.63	5.51	0.01	0.00	99.00
T690	47	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.46	0.03	18.00	7.33	6.63	0.39	19.79	6.37	0.01	0.00	99.00
T690	48	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.65	0.01	20.42	4.17	7.96	0.42	20.09	5.36	0.00	0.02	100.09
T690	49	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.90	0.26	19.15	5.56	7.51	0.40	20.89	4.98	0.03	0.00	100.68
T690	50	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.89	0.01	17.84	7.50	7.21	0.42	21.39	3.55	0.02	0.01	98.85
T690	51	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.67	0.08	18.58	6.49	8.14	0.56	19.28	5.93	0.00	0.02	99.75
T690	52	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.82	0.13	17.07	8.10	6.85	0.42	19.89	5.85	0.00	0.01	99.14
T690	53	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.90	0.21	17.25	7.81	7.13	0.42	20.00	5.66	0.06	0.00	99.43
T690	54	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.81	0.05	19.10	6.02	6.93	0.42	20.47	5.67	0.00	0.01	99.49
T690	55	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.31	0.07	18.23	7.28	7.17	0.39	19.62	6.26	0.00	0.00	100.34
T690	56	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.14	0.18	18.31	6.46	7.03	0.38	20.58	5.39	0.01	0.01	99.48
T690	57	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.31	0.24	19.31	4.83	7.18	0.43	21.59	4.58	0.02	0.00	98.48
T690	58	94BCW315	till	0.25-0.5	purple	Cr-pyrope	40.91	0.00	17.64	7.53	7.19	0.50	19.84	5.79	0.00	0.01	99.41
T690	59	94BCW315	till	0.25-0.5	purple	Cr-pyrope	41.02	0.13	17.26	7.85	7.02	0.35	20.25	5.73	0.02	0.00	99.63
T690	60	94BCW315	till	0.25-0.5	green	Cr-diopside	53.28	0.13	0.59	1.29	1.71	0.06	17.31	22.88	0.85	0.01	98.11
T690	61	94BCW315	till	0.25-0.5	green	Cr-diopside	54.20	0.10	0.50	1.22	1.77	0.07	17.27	22.67	0.80	0.01	98.60
T690	62	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.98	0.14	1.04	2.56	1.85	0.12	17.26	20.64	1.56	0.03	99.17
T690	63	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.02	0.24	1.29	2.06	2.27	0.14	16.60	20.46	1.59	0.05	97.71
T690	64	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.43	0.07	0.24	1.97	1.71	0.06	17.15	22.64	1.08	0.00	99.34
T690	65	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.25	0.20	1.73	3.62	2.38	0.08	16.17	18.34	2.28	0.03	99.09
T690	66	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.84	0.22	1.53	1.69	2.72	0.10	17.09	19.50	1.66	0.03	98.37
T690	67	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.96	0.13	1.39	1.55	2.45	0.07	17.29	20.75	1.19	0.06	98.83
T690	68	94BCW315	till	0.25-0.5	green	Cr-diopside	54.02	0.12	1.44	1.24	2.61	0.09	18.12	20.38	1.17	0.09	99.28
T690	69	94BCW315	till	0.25-0.5	green	HiCr-diopsid	52.91	0.16	1.43	2.18	2.06	0.10	17.06	19.88	1.56	0.04	97.38
T690	70	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.32	0.25	1.25	2.60	2.26	0.11	17.36	19.11	1.76	0.05	98.06
T690	71	94BCW315	till	0.25-0.5	green	Cr-diopside	54.56	0.20	0.94	1.46	2.40	0.07	16.77	21.83	1.14	0.06	99.42
T690	72	94BCW315	till	0.25-0.5	green	Cr-diopside	54.73	0.24	1.41	1.19	2.57	0.13	17.12	20.81	1.37	0.02	99.59
T690	73	94BCW315	till	0.25-0.5	green	Cr-diopside	53.03	0.14	1.63	1.26	2.54	0.09	17.80	20.76	1.31	0.05	98.62
T690	74	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.49	0.20	1.34	2.34	2.34	0.09	16.91	20.20	1.67	0.04	98.61
T690	75	94BCW315	till	0.25-0.5	green	Cr-diopside	53.73	0.10	1.67	1.31	2.48	0.09	17.23	21.07	1.31	0.05	99.03
T690	76	94BCW315	till	0.25-0.5	green	Cr-diopside	53.29	0.18	1.63	1.12	2.76	0.09	18.11	19.83	1.31	0.05	98.37
T690	77	94BCW315	till	0.25-0.5	green	Cr-diopside	54.12	0.24	1.37	0.85	2.53	0.12	17.57	20.75	1.00	0.05	98.59
T690	78	94BCW315	till	0.25-0.5	green	Cr-diopside	54.02	0.10	0.96	1.10	2.43	0.11	17.71	21.24	1.02	0.05	98.74
T690	79	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.46	0.16	1.21	3.95	2.00	0.14	16.89	18.52	2.21	0.07	98.60
T690	80	94BCW315	till	0.25-0.5	green	Cr-diopside	54.32	0.09	1.38	1.31	2.56	0.13	17.74	19.94	1.15	0.05	98.68
T690	81	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.45	0.33	1.68	1.67	2.79	0.11	17.03	19.33	1.96	0.29	98.63
T690	82	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.76	0.30	1.27	2.09	2.31	0.10	16.61	20.44	1.65	0.03	98.56
T690	83	94BCW315	till	0.25-0.5	green	Cr-diopside	51.79	0.13	0.50	1.48	1.81	0.09	16.91	22.18	0.79	0.01	95.68
T690	84	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.41	0.18	0.98	1.55	2.29	0.12	16.97	20.93	1.12	0.04	97.58
T690	85	94BCW315	till	0.25-0.5	green	Cr-diopside	52.09	0.29	1.55	1.39	2.97	0.13	16.10	19.75	1.81	0.06	96.14
T690	86	94BCW315	till	0.25-0.5	green	Cr-diopside	53.45	0.18	1.09	0.97	2.47	0.08	17.36	21.28	1.02	0.04	97.93
T690	87	94BCW315	till	0.25-0.5	green	Cr-diopside	52.45	0.09	1.57	1.25	2.72	0.07	16.83	20.01	1.32	0.07	96.36
T690	88	94BCW315	till	0.25-0.5	green	Cr-diopside	53.44	0.20	1.55	1.17	2.60	0.09	17.10	20.26	1.31	0.05	97.77
T690	89	94BCW315	till	0.25-0.5	green	Cr-diopside	53.24	0.10	1.64	1.10	2.30	0.10	17.96	20.13	1.35	0.03	97.93
T690	90	94BCW315	till	0.25-0.5	green	Cr-diopside	53.88	0.01	0.36	1.42	1.76	0.08	17.39	23.09	0.81	0.01	98.81
T690	91	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.39	0.30	1.75	1.52	2.69	0.17	16.84	19.59	1.64	0.02	97.90
T690	92	94BCW315	till	0.25-0.5	green	Cr-diopside	53.71	0.25	1.43	0.86	2.94	0.14	17.09	20.54	1.18	0.05	98.18
T690	93	94BCW315	till	0.25-0.5	green	Cr-diopside	53.71	0.14	1.61	1.21	2.53	0.11	17.70	20.47	1.31	0.05	98.84

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T690	94	94BCW315	till	0.25-0.5	green	Cr-diopside	52.70	0.21	1.49	0.74	2.87	0.17	17.76	21.00	1.07	0.04	98.02
T690	95	94BCW315	till	0.25-0.5	green	HiCr-diopsid	52.97	0.25	1.58	1.92	2.63	0.11	17.01	19.70	1.76	0.04	97.96
T690	96	94BCW315	till	0.25-0.5	green	Cr-diopside	53.06	0.21	1.65	1.33	2.58	0.08	17.53	19.80	1.38	0.06	97.67
T690	97	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.37	0.06	2.30	2.05	2.48	0.08	16.59	18.37	2.35	0.05	97.70
T690	98	94BCW315	till	0.25-0.5	green	Cr-diopside	54.14	0.12	1.70	1.46	2.56	0.09	17.46	20.01	1.48	0.05	99.08
T690	99	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.27	0.08	1.41	1.52	2.59	0.15	17.72	20.46	1.19	0.07	99.45
T690	100	94BCW315	till	0.25-0.5	green	Cr-diopside	53.33	0.12	1.55	1.35	2.61	0.07	17.16	20.03	1.32	0.04	97.59
T690	101	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.09	0.16	0.80	2.17	2.08	0.13	17.95	20.48	1.39	0.12	99.35
T690	102	94BCW315	till	0.25-0.5	green	Cr-diopside	53.52	0.10	1.64	1.25	2.71	0.15	17.52	20.08	1.32	0.05	98.34
T690	103	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.29	0.20	1.24	2.56	1.88	0.12	17.06	20.48	1.59	0.05	99.49
T690	104	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.43	0.08	1.69	2.18	2.60	0.09	17.23	19.91	1.60	0.07	98.87
T690	105	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.41	0.27	1.29	3.85	2.49	0.13	16.07	18.39	2.24	0.06	98.20
T690	106	94BCW315	till	0.25-0.5	green	Cr-diopside	53.32	0.09	0.86	1.22	2.38	0.08	17.36	21.94	1.00	0.02	98.27
T690	107	94BCW315	till	0.25-0.5	green	Cr-diopside	53.92	0.22	1.65	1.23	2.81	0.11	17.88	19.50	1.35	0.04	98.71
T690	108	94BCW315	till	0.25-0.5	green	Cr-diopside	53.82	0.15	2.08	1.37	2.50	0.09	17.31	19.18	1.79	0.02	98.31
T690	109	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.09	0.20	1.62	2.26	2.52	0.14	16.52	19.56	1.88	0.04	98.81
T690	110	94BCW315	till	0.25-0.5	green	Cr-diopside	53.56	0.16	1.35	1.17	2.49	0.12	17.45	21.08	1.05	0.05	98.48
T690	111	94BCW315	till	0.25-0.5	green	Cr-diopside	54.03	0.14	1.62	1.32	2.54	0.11	17.24	20.26	1.37	0.07	98.70
T690	112	94BCW315	till	0.25-0.5	green	HiCr-diopsid	52.62	0.11	1.69	1.59	2.86	0.10	16.65	19.62	1.60	0.05	96.89
T690	113	94BCW315	till	0.25-0.5	green	HiCr-diopsid	54.11	0.20	1.18	1.77	2.38	0.08	16.89	20.96	1.34	0.04	98.95
T690	114	94BCW315	till	0.25-0.5	green	HiCr-diopsid	53.65	0.00	1.31	2.16	1.77	0.07	17.63	20.25	1.53	0.05	98.41
T690	115	94BCW315	till	0.25-0.5	green	Cr-diopside	53.30	0.12	1.36	1.08	2.62	0.10	17.61	20.70	1.03	0.05	97.99
T690	116	94BCW315	till	0.25-0.5	green	Cr-diopside	53.68	0.20	1.51	1.14	2.42	0.13	17.56	19.97	1.27	0.06	97.94
T690	117	94BCW315	till	0.25-0.5	green	Cr-diopside	52.56	0.13	1.30	1.10	2.60	0.07	17.38	20.45	1.02	0.09	96.69
T690	118	94BCW315	till	0.25-0.5	green	Cr-diopside	53.05	0.06	1.35	1.15	2.65	0.06	17.85	20.73	1.06	0.06	98.01
T690	119	94BCW315	till	0.25-0.5	green	Cr-diopside	53.56	0.18	1.82	1.08	2.51	0.06	17.95	20.12	1.25	0.05	98.57
T690	120	94BCW315	till	0.25-0.5	pl green	enstatite	57.10	0.07	1.75	0.49	4.81	0.13	35.81	0.28	0.02	0.00	100.47
T690	121	94BCW315	till	0.25-0.5	pl green	olivine	39.48	0.05	0.00	0.04	8.24	0.13	49.71	0.03	0.00	0.00	97.69
T690	122	94BCW315	till	0.25-0.5	orange	spessartine	36.15	0.13	19.55	0.01	20.40	22.75	0.88	0.09	0.02	0.00	99.97
T690	123	94BCW315	till	0.25-0.5	orange	almandine	36.47	0.08	20.25	0.04	29.43	1.80	2.08	8.44	0.00	0.00	98.60
T690	124	94BCW315	till	0.25-0.5	purple	almandine	38.03	0.04	21.65	0.04	29.54	0.34	9.28	1.03	0.00	0.02	99.98
T690	125	94BCW315	till	0.25-0.5	black	ilmenite	0.02	50.01	0.04	0.04	45.47	3.29	0.29	0.03	0.00	0.00	99.20
T690	126	94BCW315	till	0.25-0.5	black	tourmaline	36.63	0.61	31.85	0.00	9.10	0.11	5.43	0.49	1.86	0.05	86.13
T690	127	94BCW315	till	0.25-0.5	black	tourmaline	36.06	0.59	32.26	0.04	11.13	0.17	3.64	0.12	2.02	0.06	86.07
T690	128	94BCW315	till	0.25-0.5	black	FeTi-oxide	0.11	16.72	0.10	0.11	75.02	0.29	0.36	0.00	0.03	0.01	92.75
T707	53	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.02	0.09	18.09	7.53	7.45	0.44	20.07	6.52	0.03	0.00	101.23
T707	54	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.58	0.12	17.64	7.47	7.09	0.37	20.45	5.79	0.02	0.00	100.52
T707	55	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.43	0.14	19.94	4.69	7.19	0.46	20.90	4.84	0.01	0.00	99.60
T707	56	94BCW315	till	0.5-0.84	purple	Cr-pyrope	40.79	0.00	19.83	4.93	7.96	0.59	19.73	5.58	0.00	0.00	99.40
T707	57	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.79	0.17	18.69	6.18	7.09	0.31	20.92	5.36	0.00	0.00	100.50
T707	58	94BCW315	till	0.5-0.84	purple	Cr-pyrope	39.90	0.04	16.67	8.99	6.91	0.41	19.58	6.74	0.00	0.00	99.23
T707	59	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.02	0.37	17.23	7.62	7.10	0.35	20.34	5.83	0.05	0.00	99.89
T707	60	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.06	0.30	18.02	6.57	7.85	0.38	20.45	5.91	0.01	0.00	100.54
T707	61	94BCW315	till	0.5-0.84	purple	Cr-pyrope	40.31	0.02	18.15	7.31	7.63	0.44	19.67	6.35	0.00	0.01	99.89
T707	62	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.59	0.02	18.77	6.43	7.07	0.40	20.70	5.73	0.00	0.00	100.70
T707	63	94BCW315	till	0.5-0.84	purple	Cr-pyrope	40.40	0.03	17.30	8.51	7.10	0.47	20.02	6.42	0.00	0.01	100.25
T707	64	94BCW315	till	0.5-0.84	purple	almandine	37.01	0.10	20.47	0.03	37.96	0.43	2.66	1.83	0.00	0.01	100.50
T707	65	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.40	0.37	19.65	4.39	8.65	0.34	20.46	5.58	0.01	0.01	100.85
T707	66	94BCW315	till	0.5-0.84	purple	Cr-pyrope	41.16	0.05	18.56	6.62	8.06	0.46	19.16	6.51	0.00	0.00	100.59
T707	67	94BCW315	till	0.5-0.84	black	Mg-ilmenite	0.00	52.41	0.43	6.31	26.53	0.40	13.76	0.04	0.00	0.00	99.88
T707	68	94BCW315	till	0.5-0.84	green	HiCr-diopsid	54.68	0.16	0.74	3.43	2.10	0.10	17.14	19.68	1.97	0.04	100.05
T707	69	94BCW315	till	0.5-0.84	green	Cr-diopside	54.53	0.09	1.31	1.07	2.78	0.12	18.73	20.62	1.05	0.06	100.35

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T707	70	94BCW315	till	0.5-0.84	green	Cr-diopside	55.19	0.22	1.85	0.78	2.95	0.15	17.64	19.68	1.54	0.03	100.03
T707	71	94BCW315	till	0.5-0.84	green	HiCr-diopsid	54.67	0.05	1.21	2.53	1.83	0.08	17.02	20.70	1.58	0.00	99.68
T707	72	94BCW315	till	0.5-0.84	green	Cr-diopside	53.13	0.22	1.59	1.37	2.53	0.09	17.01	20.20	1.85	0.36	98.35
T707	73	94BCW315	till	0.5-0.84	green	HiCr-diopsid	54.58	0.08	0.61	2.28	2.08	0.10	17.08	21.60	1.44	0.03	99.89
T707	74	94BCW315	till	0.5-0.84	green	Cr-diopside	53.63	0.19	1.64	1.32	2.57	0.11	17.61	20.65	1.34	0.05	99.11
T707	75	94BCW315	till	0.5-0.84	green	Cr-diopside	54.81	0.22	1.35	1.10	2.70	0.07	18.05	21.65	1.10	0.05	101.11
T707	76	94BCW315	till	0.5-0.84	green	HiCr-diopsid	53.62	0.24	2.03	2.55	2.63	0.12	16.49	18.57	2.20	0.02	98.46
T707	77	94BCW315	till	0.5-0.84	green	Cr-diopside	53.69	0.11	1.36	1.19	2.60	0.09	17.94	21.09	1.10	0.06	99.20
T707	78	94BCW315	till	0.5-0.84	green	Cr-diopside	55.62	0.22	1.65	1.36	2.93	0.10	17.48	20.32	1.68	0.03	101.38
T707	79	94BCW315	till	0.5-0.84	green	Cr-diopside	54.31	0.12	1.58	1.27	2.69	0.13	17.80	20.07	1.28	0.04	99.27
T707	80	94BCW315	till	0.5-0.84	green	HiCr-diopsid	54.26	0.14	1.57	2.86	2.57	0.13	16.79	18.85	2.11	0.06	99.33
T707	81	94BCW315	till	0.5-0.84	green	Cr-diopside	54.08	0.23	1.67	1.37	2.50	0.08	17.33	20.63	1.37	0.04	99.29
T707	82	94BCW315	till	0.5-0.84	green	HiCr-diopsid	55.13	0.25	1.71	1.85	2.45	0.12	17.39	20.33	1.58	0.05	100.87
T707	83	94BCW315	till	0.5-0.84	green	Cr-diopside	54.10	0.11	1.54	1.27	2.59	0.13	17.88	20.31	1.32	0.04	99.27
T707	84	94BCW315	till	0.5-0.84	green	Cr-diopside	53.93	0.08	1.24	1.13	2.68	0.12	18.42	20.51	1.05	0.08	99.22
T707	85	94BCW315	till	0.5-0.84	green	Cr-diopside	53.65	0.18	1.69	1.28	2.68	0.13	18.17	19.91	1.40	0.03	99.11
T707	86	94BCW315	till	0.5-0.84	green	HiCr-diopsid	53.80	0.25	1.13	3.65	2.48	0.11	16.16	18.08	2.02	0.05	97.72
T707	87	94BCW315	till	0.5-0.84	green	HiCr-diopsid	53.32	0.15	1.70	1.61	2.52	0.12	17.31	20.25	1.54	0.05	98.56
T707	88	94BCW315	till	0.5-0.84	green	Cr-diopside	54.79	0.11	1.20	1.10	2.76	0.09	18.44	20.71	1.02	0.06	100.27
T707	89	94BCW315	till	0.5-0.84	green	HiCr-diopsid	53.25	0.25	1.64	2.21	2.60	0.12	16.81	19.92	1.84	0.05	98.68
T707	90	94BCW315	till	0.5-0.84	green	HiCr-diopsid	53.88	0.23	1.31	2.20	2.45	0.08	16.89	20.50	1.73	0.09	99.37
T707	91	94BCW315	till	0.5-0.84	green	Cr-diopside	54.37	0.17	1.35	1.18	2.95	0.11	17.51	20.74	1.22	0.04	99.62
T707	92	94BCW315	till	0.5-0.84	pl green	enstatite	56.59	0.16	0.53	0.47	4.61	0.14	36.41	0.44	0.16	0.02	99.53
T707	93	94BCW315	till	0.5-0.84	pl green	olivine	40.36	0.09	0.03	0.05	8.77	0.16	51.22	0.03	0.00	0.01	100.72
T667	1	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.06	0.46	17.22	8.31	7.26	0.42	20.40	6.48	0.07	0.00	102.67
T667	2	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.10	0.47	17.31	7.96	7.83	0.33	20.19	6.26	0.03	0.00	102.46
T667	3	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.36	0.47	19.32	5.44	8.20	0.44	19.62	6.84	0.05	0.01	102.74
T667	4	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.62	0.01	19.56	6.18	7.41	0.41	20.64	5.95	0.01	0.01	102.79
T667	5	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.98	0.00	17.97	8.58	7.53	0.52	21.76	3.89	0.00	0.00	102.22
T667	6	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.32	0.46	17.98	6.96	7.93	0.38	20.31	5.82	0.05	0.00	102.23
T667	7	94BCW316	till	0.25-0.5	orange	almandine	37.66	0.05	20.96	0.01	35.15	2.97	2.03	3.19	0.00	0.02	102.03
T667	8	94BCW316	till	0.25-0.5	orange	almandine	38.28	0.05	21.66	0.00	30.83	0.96	5.01	5.46	0.01	0.02	102.29
T667	9	94BCW316	till	0.25-0.5	orange	almandine	38.49	0.03	21.67	0.03	33.07	0.59	6.65	0.91	0.00	0.01	101.44
T667	10	94BCW316	till	0.25-0.5	orange	almandine	39.04	0.06	22.34	0.01	29.09	0.32	9.54	1.17	0.00	0.01	101.58
T667	11	94BCW316	till	0.25-0.5	green	HiCr-diospid	49.72	0.54	1.02	5.03	4.27	0.17	15.91	20.04	1.13	0.05	97.86
T667	12	94BCW316	till	0.25-0.5	grey	Ti-Fe-oxide	0.32	14.67	1.13	0.05	75.02	0.09	0.01	0.05	0.02	0.04	91.41
T667	13	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	47.92	0.04	0.01	49.16	1.51	0.68	0.05	0.00	0.02	99.38
T667	14	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.62	0.03	0.03	49.07	1.21	1.29	0.00	0.00	0.00	100.25
T667	15	94BCW316	till	0.25-0.5	black	Ilmenite	0.03	47.04	0.03	0.02	50.63	0.71	0.90	0.00	0.00	0.03	99.38
T667	16	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	52.03	0.03	0.01	45.69	2.29	0.20	0.00	0.00	0.01	100.26
T667	17	94BCW316	till	0.25-0.5	black	Hematite	0.11	0.00	0.05	0.00	90.68	0.00	0.02	0.03	0.01	0.00	90.90
T667	18	94BCW316	till	0.25-0.5	black	Ilmenite	0.03	50.98	0.07	0.02	48.09	0.57	0.35	0.02	0.00	0.00	100.13
T667	19	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	51.57	0.03	0.02	47.09	0.68	0.27	0.01	0.02	0.00	99.67
T667	20	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.23	0.06	0.03	49.47	0.89	1.01	0.01	0.00	0.02	99.71
T667	21	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	47.97	0.03	0.15	50.17	0.57	0.72	0.01	0.00	0.01	99.61
T667	22	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.63	0.04	0.04	48.29	0.68	0.07	0.00	0.00	0.01	99.77
T667	23	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.58	0.03	0.00	49.65	1.18	0.04	0.02	0.04	0.00	99.54
T667	24	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	52.61	0.06	0.00	47.31	0.43	0.38	0.02	0.02	0.00	100.81
T667	25	94BCW316	till	0.25-0.5	black	Amphibole	43.87	1.36	11.83	0.00	12.97	0.25	13.67	12.01	0.80	1.66	98.42
T667	26	94BCW316	till	0.25-0.5	black	Ilmenite	0.02	51.72	0.02	0.03	47.75	0.15	0.13	0.01	0.01	0.00	99.83
T667	27	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.74	0.03	0.00	45.50	3.58	0.07	0.00	0.00	0.02	99.94
T667	28	94BCW316	till	0.25-0.5	black	Ilmenite	0.05	50.86	0.11	0.02	47.51	0.59	0.63	0.00	0.00	0.00	99.76

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FeO	MnO	MgO	CaO	Na2O	K2O	TOTAL
T667	29	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	52.13	0.06	0.03	46.75	0.75	0.27	0.01	0.01	0.00	100.02
T667	30	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	49.81	0.11	0.04	48.11	0.52	0.51	0.00	0.00	0.00	99.10
T667	31	94BCW316	till	0.25-0.5	black	Ilmenite	0.02	48.43	0.04	0.02	46.11	4.81	0.07	0.01	0.00	0.02	99.53
T667	32	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	49.31	0.05	0.00	46.65	3.49	0.39	0.03	0.01	0.00	99.93
T667	33	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	51.76	0.03	0.00	46.39	1.31	0.28	0.00	0.00	0.00	99.77
T667	34	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.96	0.09	0.02	48.03	0.55	0.52	0.02	0.03	0.01	100.23
T667	35	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.25	0.09	0.00	48.75	1.56	0.80	0.02	0.00	0.00	99.47
T667	36	94BCW316	till	0.25-0.5	black	Ilmenite	0.02	49.71	0.05	0.01	48.08	0.51	0.45	0.01	0.20	0.04	99.07
T667	37	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	52.02	0.03	0.02	46.19	1.99	0.09	0.00	0.00	0.02	100.35
T667	38	94BCW316	till	0.25-0.5	black	Ilmenite	0.01	48.94	0.08	0.03	48.68	1.41	0.52	0.01	0.00	0.01	99.68
T667	39	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.71	0.05	0.05	48.20	0.35	0.34	0.00	0.00	0.01	99.70
T667	40	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.31	0.02	0.00	47.80	2.78	0.69	0.02	0.00	0.00	99.62
T667	41	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.65	0.05	0.01	48.31	0.44	0.34	0.04	0.03	0.00	99.86
T667	42	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	48.95	0.03	0.03	47.18	2.81	0.27	0.00	0.00	0.01	99.28
T667	43	94BCW316	till	0.25-0.5	black	Ilmenite	0.03	52.60	0.03	0.02	46.92	0.39	0.44	0.03	0.00	0.00	100.45
T667	44	94BCW316	till	0.25-0.5	black	Ilmenite	0.01	52.03	0.03	0.02	47.14	0.19	0.36	0.03	0.00	0.00	99.80
T667	45	94BCW316	till	0.25-0.5	black	Ilmenite	0.01	49.37	0.02	0.04	49.50	0.90	0.03	0.03	0.00	0.00	99.90
T667	46	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	51.03	0.04	0.04	47.49	1.89	0.02	0.01	0.00	0.00	100.53
T667	47	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.19	0.06	0.03	48.80	0.70	0.28	0.00	0.01	0.00	100.07
T667	48	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	51.49	0.03	0.01	45.79	1.17	0.07	0.02	0.00	0.00	98.57
T667	49	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	52.58	0.02	0.10	46.79	0.21	0.93	0.02	0.00	0.00	100.66
T667	50	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	50.72	0.06	0.00	48.57	0.59	0.24	0.02	0.00	0.01	100.22
T667	51	94BCW316	till	0.25-0.5	black	Ilmenite	0.00	46.66	0.38	0.11	51.03	0.47	0.39	0.01	0.02	0.02	99.08
T707	94	94BCW316	till	0.5-0.84	purple	Cr-pyrope	41.60	0.45	20.09	3.54	7.76	0.35	21.66	4.86	0.01	0.00	100.32
T707	95	94BCW316	till	0.5-0.84	pl green	olivine	39.82	0.02	0.03	0.03	8.95	0.15	51.25	0.03	0.00	0.02	100.30
T667	52	94BCW316	till	0.25-0.5	purple	Cr-pyrope	43.11	0.00	20.47	5.42	7.19	0.42	21.68	5.33	0.00	0.02	103.65
T667	53	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.94	0.02	20.10	5.59	7.63	0.41	20.57	5.91	0.01	0.00	103.18
T667	54	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.38	0.05	17.78	8.82	7.10	0.54	20.90	5.34	0.00	0.00	102.91
T667	55	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.20	0.07	19.56	5.58	7.62	0.34	20.78	5.47	0.00	0.02	101.63
T667	56	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.13	0.41	18.10	6.98	7.60	0.39	20.48	6.01	0.02	0.00	102.12
T667	57	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.57	0.26	18.93	6.35	7.55	0.35	20.83	5.80	0.02	0.00	102.66
T667	58	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.61	0.01	19.20	6.66	8.31	0.63	19.22	6.50	0.00	0.00	102.14
T667	59	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.12	0.03	19.79	5.77	7.82	0.47	21.59	4.07	0.00	0.02	101.67
T667	60	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.64	0.01	19.46	6.33	7.45	0.45	20.32	5.89	0.00	0.00	101.54
T667	61	94BCW316	till	0.25-0.5	purple	Cr-pyrope	40.95	0.36	17.46	7.17	8.22	0.42	19.25	6.71	0.02	0.02	100.58
T667	62	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.09	0.02	18.46	7.25	8.01	0.55	18.96	5.99	0.00	0.00	100.33
T667	63	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.78	0.06	19.20	6.45	8.04	0.54	20.60	5.48	0.00	0.01	102.15
T667	64	94BCW316	till	0.25-0.5	purple	Cr-pyrope	40.78	0.20	16.77	8.08	11.06	0.60	17.24	6.54	0.03	0.00	101.30
T667	65	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.09	0.00	18.40	7.72	7.03	0.47	21.93	3.55	0.02	0.01	101.22
T667	66	94BCW316	till	0.25-0.5	purple	Cr-pyrope	40.66	0.77	15.92	8.85	7.05	0.46	17.33	9.81	0.00	0.00	100.85
T667	67	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.57	0.20	17.86	7.32	6.88	0.35	20.57	5.71	0.02	0.00	100.48
T667	68	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.26	0.05	18.69	6.52	8.42	0.51	19.81	5.53	0.00	0.00	100.78
T667	69	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.63	0.05	19.19	5.88	9.62	0.59	19.37	5.28	0.04	0.02	101.67
T667	70	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.49	0.03	17.63	8.44	6.93	0.44	19.73	6.88	0.00	0.01	101.56
T667	71	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.21	0.33	19.62	4.67	8.59	0.45	19.65	6.85	0.01	0.00	102.36
T667	72	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.58	0.24	17.25	8.30	6.76	0.36	20.58	6.19	0.03	0.00	101.29
T667	73	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.61	0.41	16.72	9.14	7.09	0.37	20.27	6.29	0.04	0.00	101.93
T667	74	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.26	0.32	19.12	5.95	7.79	0.43	20.86	5.39	0.03	0.01	102.15
T667	75	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.58	0.24	20.63	4.11	7.49	0.35	21.53	5.17	0.01	0.00	102.11
T667	76	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.80	0.38	19.75	4.76	8.39	0.50	19.30	6.74	0.00	0.00	101.62
T667	77	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.85	0.23	15.66	10.55	6.85	0.44	20.10	6.43	0.05	0.02	102.18
T667	78	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.31	0.05	18.14	8.17	7.03	0.43	21.06	5.36	0.01	0.00	102.56

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T667	79	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.82	0.38	19.53	5.02	8.00	0.42	20.13	6.25	0.01	0.08	101.63
T667	80	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.86	0.05	18.05	7.81	7.45	0.52	19.55	6.40	0.03	0.00	101.72
T667	81	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.40	0.27	19.33	5.92	7.02	0.39	21.65	5.31	0.06	0.00	102.36
T667	82	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.34	0.28	15.52	10.70	6.72	0.40	19.73	6.98	0.04	0.01	101.72
T667	83	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.25	0.01	20.38	5.20	8.29	0.61	21.51	3.63	0.04	0.00	101.92
T667	84	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.47	0.01	20.85	4.50	7.61	0.46	21.18	4.92	0.02	0.01	102.01
T667	85	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.09	0.03	18.78	6.86	7.57	0.44	19.91	6.38	0.00	0.00	102.06
T667	86	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.41	0.26	19.17	5.62	7.32	0.41	20.95	5.11	0.04	0.00	101.30
T667	87	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.79	0.59	18.94	5.91	7.33	0.42	20.92	5.44	0.06	0.00	101.40
T667	88	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.13	0.37	19.76	4.43	8.27	0.43	20.20	5.75	0.02	0.00	101.34
T667	89	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.37	0.33	20.83	2.95	8.20	0.33	21.43	4.93	0.00	0.00	101.38
T667	90	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.96	0.25	18.53	6.71	7.39	0.45	20.88	5.31	0.02	0.00	101.49
T667	91	94BCW316	till	0.25-0.5	purple	Cr-pyrope	40.90	0.19	17.86	7.25	7.63	0.32	19.82	6.10	0.02	0.00	100.10
T667	92	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.58	0.24	20.01	4.73	8.00	0.33	21.20	4.91	0.02	0.00	101.01
T667	93	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.41	0.24	20.20	4.50	7.96	0.40	21.31	4.81	0.02	0.00	101.85
T667	94	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.85	0.40	18.81	6.44	7.13	0.29	21.07	5.73	0.01	0.03	101.75
T667	95	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.02	0.39	19.39	4.98	8.39	0.44	19.13	7.08	0.01	0.02	101.85
T667	96	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.22	0.11	18.06	7.37	8.49	0.38	19.55	5.77	0.00	0.02	100.96
T667	97	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.26	0.49	19.81	4.43	7.98	0.37	21.22	5.27	0.00	0.01	101.83
T667	98	94BCW316	till	0.25-0.5	orange	almandine	37.61	0.10	20.14	0.00	36.27	0.40	1.38	5.33	0.04	0.00	101.26
T667	99	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.97	0.35	19.71	4.91	8.88	0.36	19.28	7.20	0.00	0.00	102.66
T667	100	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.40	0.26	20.58	4.14	7.76	0.42	21.26	4.58	0.04	0.01	101.43
T667	101	94BCW316	till	0.25-0.5	purple	Cr-pyrope	43.22	0.46	20.82	3.99	7.10	0.41	21.96	5.06	0.04	0.01	103.07
T667	102	94BCW316	till	0.25-0.5	purple	Cr-pyrope	43.06	0.34	19.45	5.62	6.92	0.36	21.45	5.61	0.01	0.02	102.83
T667	103	94BCW316	till	0.25-0.5	purple	Cr-pyrope	40.60	0.27	15.02	10.25	10.83	0.66	16.48	7.50	0.01	0.01	101.63
T667	104	94BCW316	till	0.25-0.5	ilky purpl	almandine	39.28	0.07	22.42	0.05	32.47	0.52	7.47	1.18	0.01	0.00	103.48
T667	105	94BCW316	till	0.25-0.5	ilky purpl	almandine	39.00	0.00	21.97	0.02	31.68	0.33	8.48	0.81	0.02	0.00	102.30
T667	106	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.10	0.38	19.14	5.29	8.08	0.46	20.12	6.27	0.00	0.02	101.86
T667	107	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.55	0.21	16.61	8.90	7.12	0.34	19.84	6.68	0.04	0.00	101.29
T667	108	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.70	0.04	19.39	6.06	8.39	0.56	19.28	6.30	0.00	0.00	101.72
T667	109	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.06	0.02	20.50	4.71	7.58	0.41	20.56	5.49	0.00	0.04	101.37
T667	110	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.71	0.26	19.15	5.44	7.54	0.34	20.68	5.64	0.00	0.02	100.80
T667	111	94BCW316	till	0.25-0.5	purple	Cr-pyrope	41.90	0.27	18.96	5.98	6.96	0.39	21.23	5.45	0.05	0.01	101.20
T667	112	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.09	0.20	19.22	5.18	7.51	0.36	21.31	5.42	0.00	0.00	101.30
T667	113	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.50	0.31	20.21	4.43	7.79	0.33	21.27	5.40	0.03	0.02	102.28
T667	114	94BCW316	till	0.25-0.5	purple	Cr-pyrope	42.11	0.02	19.08	6.19	7.33	0.41	20.27	5.70	0.00	0.00	101.11
T667	115	94BCW316	till	0.25-0.5	orange	almandine	38.24	0.25	21.21	0.00	27.91	1.14	3.55	9.10	0.01	0.00	101.42
T667	116	94BCW316	till	0.25-0.5	orange	almandine	38.09	0.09	21.07	0.00	29.29	0.75	2.35	10.05	0.01	0.01	101.71
T667	117	94BCW316	till	0.25-0.5	orange	almandine	37.51	0.07	20.95	0.00	27.88	1.81	2.32	10.15	0.00	0.02	100.71
T667	118	94BCW316	till	0.25-0.5	orange	almandine	38.88	0.17	21.79	0.05	22.66	0.75	2.92	14.84	0.01	0.01	102.07
T667	119	94BCW316	till	0.25-0.5	orange	almandine	38.28	0.06	21.38	0.02	27.83	1.53	2.03	10.57	0.00	0.02	101.71
T667	120	94BCW316	till	0.25-0.5	pale green	Olivine	41.35	0.03	0.02	0.00	7.01	0.08	52.82	0.01	0.00	0.00	101.32
T667	121	94BCW316	till	0.25-0.5	pale green	Olivine	40.69	0.03	0.02	0.01	7.97	0.18	50.74	0.08	0.00	0.00	99.70
T667	122	94BCW316	till	0.25-0.5	green	Cr-diopside	55.54	0.16	1.70	1.25	2.59	0.08	17.78	21.44	1.35	0.05	101.93
T667	123	94BCW316	till	0.25-0.5	green	Cr-diopside	54.96	0.14	1.62	1.31	2.63	0.08	17.77	20.79	1.32	0.05	100.66
T667	124	94BCW316	till	0.25-0.5	green	Cr-diopside	53.68	0.16	1.53	0.72	6.07	0.16	16.41	21.40	0.48	0.00	100.59
T667	125	94BCW316	till	0.25-0.5	green	HiCr-diopsid	55.16	0.19	1.23	2.57	2.46	0.09	16.84	21.23	1.53	0.07	101.36
T667	126	94BCW316	till	0.25-0.5	green	HiCr-diopsid	54.99	0.12	0.41	1.68	1.86	0.05	17.55	23.30	0.98	0.01	100.95
T667	127	94BCW316	till	0.25-0.5	green	HiCr-diopsid	55.36	0.21	1.54	1.99	2.64	0.11	17.09	20.53	1.69	0.06	101.22
T667	128	94BCW316	till	0.25-0.5	green	HiCr-diopsid	54.51	0.24	1.63	2.27	2.65	0.10	16.89	19.97	1.83	0.04	100.15
T667	129	94BCW316	till	0.25-0.5	green	HiCr-diopsid	55.21	0.12	1.43	2.07	2.70	0.07	16.96	21.02	1.52	0.03	101.13
T667	130	94BCW316	till	0.25-0.5	green	HiCr-diopsid	55.77	0.19	1.07	2.32	2.63	0.12	17.19	21.60	1.45	0.06	102.40

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T667	131	94BCW316	till	0.25-0.5	green	Cr-diopside	55.31	0.27	1.64	1.47	2.78	0.10	17.33	20.58	1.64	0.06	101.17
T667	132	94BCW316	till	0.25-0.5	green	Cr-diopside	54.89	0.14	1.64	1.04	2.50	0.13	18.16	20.55	1.25	0.06	100.37
T667	133	94BCW316	till	0.25-0.5	green	HiCr-diopsid	54.90	0.24	1.23	1.79	2.22	0.07	17.01	21.24	1.47	0.05	100.23
T667	134	94BCW316	till	0.25-0.5	green	HiCr-diopsid	54.67	0.23	1.65	2.46	2.46	0.08	16.92	20.09	1.88	0.05	100.50
T667	135	94BCW316	till	0.25-0.5	green	Cr-diopside	55.26	0.11	1.27	1.19	2.71	0.09	18.40	21.00	1.03	0.06	101.12
T667	136	94BCW316	till	0.25-0.5	green	Cr-diopside	55.13	0.15	0.82	1.02	2.68	0.11	17.82	22.81	0.92	0.02	101.49
T668	1	94BCW316	till	0.25-0.5	black	ilmenite	0.00	52.20	0.03	0.04	47.71	0.33	0.22	0.03	0.00	0.00	100.56
T668	2	94BCW316	till	0.25-0.5	black	ilmenite	0.03	50.03	0.03	0.03	47.96	0.71	0.35	0.00	0.01	0.02	99.17
T668	3	94BCW316	till	0.25-0.5	black	ilmenite	0.12	48.28	0.04	0.07	50.14	0.22	0.19	0.01	0.00	0.00	99.06
T668	4	94BCW316	till	0.25-0.5	black	chromite	0.15	3.78	2.19	52.52	30.62	0.39	8.69	0.00	0.01	0.00	98.36
T668	5	94BCW316	till	0.25-0.5	black	ilmenite	0.04	48.58	0.04	0.04	49.58	0.82	0.11	0.02	0.00	0.01	99.24
T668	6	94BCW316	till	0.25-0.5	black	ilmenite	0.07	46.19	0.01	0.02	49.49	2.61	0.50	0.00	0.02	0.00	98.91
T668	7	94BCW316	till	0.25-0.5	black	ilmenite	0.01	50.50	0.04	0.03	48.07	0.47	0.28	0.05	0.01	0.00	99.46
T668	8	94BCW316	till	0.25-0.5	black	ilmenite	0.12	46.36	0.04	0.02	50.65	1.82	0.04	0.01	0.02	0.00	99.08
T668	9	94BCW316	till	0.25-0.5	black	ilmenite	0.02	50.39	0.06	0.03	48.48	0.67	0.09	0.02	0.00	0.02	99.78
T668	10	94BCW316	till	0.25-0.5	black	ilmenite	0.04	47.50	0.06	0.02	49.10	1.20	1.15	0.02	0.01	0.00	99.10
T668	11	94BCW316	till	0.25-0.5	grey	hematite	0.48	0.14	0.45	0.10	87.28	0.23	0.03	0.02	0.00	0.02	88.75
T668	12	94BCW316	till	0.25-0.5	black	ilmenite	0.04	51.10	0.04	0.04	48.43	0.29	0.10	0.00	0.04	0.00	100.07
T668	13	94BCW316	till	0.25-0.5	black	rutile	0.00	94.87	0.13	0.34	0.93	0.02	0.02	0.02	0.00	0.02	96.36
T668	14	94BCW316	till	0.25-0.5	black	ilmenite	0.00	50.12	0.04	0.02	48.64	0.69	0.08	0.03	0.00	0.00	99.62
T668	15	94BCW316	till	0.25-0.5		*plucked*											
T668	16	94BCW316	till	0.25-0.5	black	ilmenite	0.09	50.64	0.05	0.03	47.70	0.53	0.39	0.03	0.00	0.03	99.49
T668	17	94BCW316	till	0.25-0.5	black	ilmenite	0.11	49.90	0.04	0.00	47.54	1.46	0.05	0.00	0.00	0.01	99.12
T668	18	94BCW316	till	0.25-0.5	black	chromite	0.22	1.80	1.54	58.94	27.54	0.45	8.68	0.02	0.01	0.01	99.21
T668	19	94BCW316	till	0.25-0.5	black	chromite	0.16	0.22	7.65	59.47	23.48	0.38	8.44	0.02	0.00	0.03	99.84
T668	20	94BCW316	till	0.25-0.5		*plucked*											
T668	21	94BCW316	till	0.25-0.5	black	ilmenite	0.05	48.20	0.08	0.00	49.78	0.69	0.32	0.00	0.00	0.01	99.14
T668	22	94BCW316	till	0.25-0.5	black	ilmenite	0.00	48.89	0.04	0.02	46.50	2.31	1.05	0.03	0.00	0.01	98.84
T668	23	94BCW316	till	0.25-0.5	black	ilmenite	0.05	49.92	0.07	0.02	48.33	0.59	0.48	0.03	0.00	0.00	99.48
T668	24	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.13	31.68	0.05	0.01	58.23	4.35	0.18	0.00	0.00	0.00	94.62
T668	25	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.30	14.68	0.06	0.09	77.01	0.41	0.09	0.03	0.00	0.00	92.66
T668	26	94BCW316	till	0.25-0.5	black	ilmenite	0.06	50.95	0.04	0.00	45.24	2.93	0.00	0.00	0.00	0.02	99.23
T668	27	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.13	38.03	0.07	0.03	59.28	0.05	0.01	0.01	0.02	0.02	97.67
T668	28	94BCW316	till	0.25-0.5	black	ilmenite	0.07	49.87	0.04	0.00	44.46	4.58	0.06	0.01	0.00	0.00	99.07
T668	29	94BCW316	till	0.25-0.5	black	ilmenite	0.02	49.01	0.04	0.00	48.72	1.10	0.17	0.01	0.00	0.00	99.08
T668	30	94BCW316	till	0.25-0.5	black	ilmenite	0.05	51.81	0.04	0.01	46.88	0.64	0.47	0.04	0.00	0.01	99.94
T668	31	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.16	15.09	0.12	0.04	76.73	0.65	0.11	0.00	0.02	0.00	92.92
T668	32	94BCW316	till	0.25-0.5	black	*plucked*											
T668	33	94BCW316	till	0.25-0.5	black	rutile	0.00	97.49	0.13	0.11	0.21	0.02	0.00	0.02	0.00	0.01	97.98
T668	34	94BCW316	till	0.25-0.5		*plucked*											
T668	35	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.10	14.90	0.21	0.10	76.99	0.13	0.23	0.00	0.04	0.01	92.71
T668	36	94BCW316	till	0.25-0.5	black	Fe-Ti-oxide	0.26	20.24	0.09	0.02	70.82	0.50	0.22	0.00	0.00	0.00	92.15
T668	37	94BCW316	till	0.25-0.5	black	ilmenite	0.07	50.98	0.03	0.00	47.32	1.49	0.31	0.03	0.02	0.00	100.26
T668	38	94BCW316	till	0.25-0.5	black	chromite	0.21	1.39	1.58	62.38	22.99	0.40	9.82	0.04	0.03	0.03	98.84
T668	39	94BCW316	till	0.25-0.5	black	*plucked*											
T668	40	94BCW316	till	0.25-0.5	black	chromite	0.18	0.43	6.76	58.65	23.56	0.34	8.69	0.03	0.00	0.00	98.66
T668	41	94BCW316	till	0.25-0.5	black	*epoxy*	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
T668	42	94BCW316	till	0.25-0.5	black	ilmenite	0.08	41.54	0.04	0.04	54.05	1.69	0.06	0.03	0.00	0.02	97.55
T707	96	94BCW316	till	0.5-0.84	purple	Cr-pyrope	41.06	0.48	17.29	7.23	7.46	0.35	20.24	5.75	0.03	0.01	99.90
T707	97	94BCW316	till	0.5-0.84	purple	Cr-pyrope	41.83	0.00	19.82	5.06	7.68	0.60	21.34	4.19	0.04	0.11	100.67
T707	98	94BCW316	till	0.5-0.84	purple	Cr-pyrope	41.34	0.30	19.87	4.23	7.80	0.38	21.23	5.12	0.00	0.01	100.28
T707	99	94BCW316	till	0.5-0.84	orange	almandine	38.11	0.08	20.83	0.02	27.19	1.19	3.20	10.19	0.00	0.01	100.81

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T707	100	94BCW316	till	0.5-0.84	green	Cr-diopside	53.91	0.22	1.23	1.40	2.37	0.09	17.61	21.48	1.16	0.07	99.53
T707	101	94BCW316	till	0.5-0.84	green	Cr-diopside	52.95	0.28	1.21	1.06	2.50	0.09	17.38	21.53	1.24	0.05	98.28
T707	102	94BCW316	till	0.5-0.84	green	HiCr-diopsid	54.29	0.27	1.45	2.15	2.37	0.10	17.34	19.64	1.62	0.07	99.28
T707	103	94BCW316	till	0.5-0.84	green	Cr-diopside	54.79	0.18	1.43	0.98	2.66	0.10	18.19	20.99	1.15	0.05	100.51
T707	104	94BCW316	till	0.5-0.84	green	Cr-diopside	53.48	0.22	0.40	1.28	2.41	0.12	17.90	22.92	0.76	0.01	99.48
T707	105	94BCW316	till	0.5-0.84	green	HiCr-diopsid	52.63	0.14	1.19	1.70	2.39	0.08	16.93	20.89	0.88	0.06	96.89
T707	106	94BCW316	till	0.5-0.84	green	Cr-diopside	53.64	0.20	1.50	1.06	2.84	0.09	17.99	20.41	1.24	0.05	99.01
T707	107	94BCW316	till	0.5-0.84	green	Cr-diopside	53.28	0.20	1.63	1.31	2.62	0.08	17.82	20.69	1.37	0.06	99.07
T707	108	94BCW316	till	0.5-0.84	pl green	olivine	40.45	0.00	0.01	0.05	7.56	0.11	51.71	0.02	0.00	0.00	99.90
T707	109	94BCW316	till	0.5-0.84	pl green	olivine	40.00	0.04	0.02	0.07	8.71	0.15	50.57	0.06	0.00	0.00	99.63
T691	1	94BCW317	till	0.25-0.5	orange	almandine	37.09	0.03	20.24	0.05	28.79	1.64	2.18	9.57	0.00	0.01	99.60
T691	2	94BCW317	till	0.25-0.5	orange	almandine	37.52	0.22	20.17	0.06	26.77	0.56	2.56	12.05	0.00	0.00	99.91
T691	3	94BCW317	till	0.25-0.5	orange	almandine	37.07	0.13	20.17	0.05	27.79	2.62	1.88	9.94	0.00	0.00	99.66
T691	4	94BCW317	till	0.25-0.5	orange	almandine	38.54	0.06	20.66	0.07	24.71	0.62	7.12	8.31	0.00	0.03	100.11
T691	5	94BCW317	till	0.25-0.5	orange	almandine	37.58	0.11	20.37	0.11	25.39	1.22	1.95	12.89	0.00	0.00	99.62
T691	6	94BCW317	till	0.25-0.5	orange	almandine	37.91	0.05	20.66	0.08	23.12	1.07	1.99	15.17	0.02	0.00	100.06
T691	7	94BCW317	till	0.25-0.5	black	Ilmenite	0.08	53.07	0.05	0.05	46.37	1.21	0.13	0.01	0.00	0.02	100.97
T691	8	94BCW317	till	0.25-0.5	black	Ilmenite	0.10	48.33	0.07	0.07	49.13	1.37	1.16	0.00	0.00	0.01	100.23
T691	9	94BCW317	till	0.25-0.5	black	Ilmenite	0.08	50.65	0.09	0.06	47.88	0.55	0.74	0.04	0.00	0.01	100.08
T691	10	94BCW317	till	0.25-0.5	black	Ilmenite	0.14	50.03	0.10	0.05	48.39	0.65	0.26	0.00	0.01	0.00	99.63
T691	11	94BCW317	till	0.25-0.5	black	Ilmenite	0.07	50.69	0.07	0.02	48.82	0.49	0.31	0.01	0.00	0.00	100.48
T691	12	94BCW317	till	0.25-0.5	black	Ilmenite	0.11	50.02	0.05	0.06	48.17	0.62	0.33	0.00	0.00	0.00	99.35
T691	13	94BCW317	till	0.25-0.5	green	Diopside	53.08	0.07	1.26	0.45	4.56	0.15	16.87	22.58	0.36	0.00	99.38
T691	14	94BCW317	till	0.25-0.5	mlk gy	almandine	37.03	0.56	20.57	0.09	34.39	0.43	5.68	1.13	0.01	0.00	99.90
T691	15	94BCW317	till	0.25-0.5	mlk gy	almandine	37.64	0.08	21.03	0.08	31.30	0.37	8.23	0.91	0.00	0.00	99.63
T668	43	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.59	0.12	19.70	3.83	14.81	0.50	15.03	5.83	0.01	0.02	99.42
T668	44	94BCW317	till	0.25-0.5	green	Cr-diopside	51.34	0.13	2.61	0.81	3.42	0.14	16.82	23.07	0.37	0.01	98.72
T668	45	94BCW317	till	0.25-0.5	green	diopside	52.81	0.03	0.46	0.02	4.80	0.15	15.84	24.77	0.31	0.00	99.19
T668	46	94BCW317	till	0.25-0.5	green	diopside	50.96	0.06	0.89	0.10	5.29	0.21	15.50	24.26	0.43	0.00	97.70
T668	47	94BCW317	till	0.25-0.5	green	diopside	52.47	0.14	1.96	0.46	4.86	0.14	16.52	22.75	0.40	0.02	99.73
T668	48	94BCW317	till	0.25-0.5	black	ilmenite	0.00	50.65	0.02	0.02	47.71	0.95	0.28	0.00	0.00	0.00	99.64
T668	49	94BCW317	till	0.25-0.5	black	chromite	0.16	2.22	3.49	55.18	28.70	0.41	9.43	0.01	0.00	0.00	99.59
T668	50	94BCW317	till	0.25-0.5	black	ilmenite	0.05	47.79	0.07	0.00	47.24	3.44	0.66	0.05	0.02	0.01	99.32
T668	51	94BCW317	till	0.25-0.5	black	ilmenite	0.04	49.14	0.03	0.06	48.47	1.71	0.08	0.00	0.00	0.03	99.56
T668	52	94BCW317	till	0.25-0.5	black	ilmenite	0.00	50.97	0.03	0.01	47.24	0.43	0.44	0.02	0.00	0.01	99.16
T668	53	94BCW317	till	0.25-0.5	black	ilmenite	0.04	52.11	0.00	0.05	46.06	0.40	0.50	0.00	0.00	0.01	99.18
T668	54	94BCW317	till	0.25-0.5	black	ilmenite	0.02	47.92	0.02	0.00	49.44	2.43	0.14	0.02	0.00	0.00	99.99
T668	55	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.41	0.28	14.18	11.59	7.51	0.43	18.33	7.92	0.04	0.00	99.67
T668	56	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.22	0.15	17.97	7.28	6.95	0.42	20.23	5.64	0.04	0.02	98.90
T668	57	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.28	0.03	18.26	7.61	6.87	0.33	21.73	4.03	0.01	0.02	99.17
T668	58	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.86	0.03	16.72	9.09	7.41	0.49	19.22	6.91	0.04	0.01	99.77
T668	59	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.93	0.15	17.17	8.44	6.88	0.46	19.98	6.11	0.01	0.01	99.13
T668	60	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.62	0.00	15.77	10.04	7.47	0.47	17.55	7.78	0.00	0.01	98.70
T668	61	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.10	0.02	18.13	7.62	6.92	0.43	19.97	6.11	0.04	0.00	99.32
T668	62	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.13	0.00	16.60	9.22	7.00	0.41	18.83	7.54	0.01	0.00	99.74
T668	63	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.42	0.05	17.96	7.29	8.08	0.53	17.68	6.94	0.01	0.03	97.98
T668	64	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.68	0.25	17.15	7.97	7.34	0.38	20.08	5.95	0.01	0.00	98.81
T668	65	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.32	0.33	17.29	8.02	7.16	0.43	19.95	5.91	0.02	0.00	99.42
T668	66	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.11	0.01	17.38	8.36	7.31	0.49	20.80	4.38	0.00	0.00	98.83
T668	67	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.52	0.38	16.77	7.99	6.91	0.39	19.88	6.21	0.04	0.01	98.09
T668	68	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.61	0.03	17.80	7.81	7.20	0.45	20.81	4.27	0.00	0.00	97.97
T668	69	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.30	0.05	20.08	4.96	8.40	0.50	19.36	5.70	0.00	0.00	99.35

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T668	70	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.35	0.07	18.21	6.59	7.22	0.48	19.88	5.73	0.00	0.01	97.53
T668	71	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.69	0.40	18.71	5.57	7.54	0.41	20.28	5.57	0.04	0.01	99.19
T668	72	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.32	0.24	15.18	10.40	9.82	0.66	17.04	7.06	0.02	0.00	99.72
T668	73	94BCW317	till	0.25-0.5	purple	Cr-pyrope	41.08	0.33	18.57	6.49	7.62	0.46	20.41	5.36	0.05	0.00	100.36
T668	74	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.43	0.05	17.58	8.32	7.02	0.41	20.00	6.09	0.01	0.01	99.92
T668	75	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.92	0.37	19.52	5.10	7.13	0.30	21.52	5.18	0.00	0.02	100.05
T668	76	94BCW317	till	0.25-0.5	purple	Cr-pyrope	41.24	0.21	19.34	5.64	7.42	0.45	20.78	5.31	0.01	0.02	100.40
T668	77	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.50	0.31	17.43	7.47	7.66	0.38	19.72	6.16	0.04	0.02	99.69
T668	78	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.58	0.34	18.85	5.54	8.41	0.43	18.83	6.56	0.01	0.01	99.56
T668	79	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.24	0.06	18.84	6.38	7.13	0.47	20.11	6.04	0.00	0.00	99.27
T668	80	94BCW317	till	0.25-0.5	purple	Cr-pyrope	41.46	0.26	20.82	3.75	7.94	0.37	21.20	5.09	0.01	0.01	100.90
T668	81	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.47	0.14	18.70	6.07	7.34	0.38	20.54	5.93	0.00	0.02	99.58
T668	82	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.49	0.31	18.40	6.13	7.85	0.38	19.80	5.80	0.00	0.00	99.16
T668	83	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.32	0.47	19.22	4.96	7.97	0.39	19.21	6.70	0.02	0.00	99.25
T668	84	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.20	0.41	18.24	6.39	7.27	0.40	20.17	5.77	0.00	0.01	98.83
T668	85	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.41	0.31	18.90	5.89	7.29	0.33	20.44	5.30	0.03	0.00	98.89
T668	86	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.17	0.58	16.42	8.76	6.53	0.39	20.13	6.23	0.05	0.00	99.25
T668	87	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.22	0.23	17.39	7.35	7.10	0.41	19.77	6.08	0.01	0.03	98.59
T668	88	94BCW317	till	0.25-0.5	purple	Cr-pyrope	38.78	0.22	17.34	5.95	11.95	0.61	15.80	7.36	0.01	0.00	98.02
T668	89	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.94	0.32	19.62	4.18	7.08	0.30	20.70	5.04	0.04	0.01	97.23
T668	90	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.74	0.39	19.24	4.90	7.91	0.45	20.51	4.85	0.05	0.00	98.03
T668	91	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.36	0.38	17.43	7.03	7.29	0.39	20.04	5.94	0.05	0.03	97.93
T668	92	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.31	0.38	16.46	8.41	6.95	0.37	19.68	6.30	0.03	0.00	97.89
T668	93	94BCW317	till	0.25-0.5		*plucked*											
T668	94	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.05	0.02	17.11	8.65	7.10	0.41	18.82	7.13	0.00	0.01	99.31
T668	95	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.33	0.00	19.34	5.39	7.74	0.38	19.54	5.74	0.02	0.00	98.47
T668	96	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.20	0.30	19.01	5.62	6.95	0.32	21.03	5.47	0.01	0.01	98.91
T668	97	94BCW317	till	0.25-0.5	purple	Cr-pyrope	41.04	0.32	18.50	6.25	7.66	0.37	20.10	5.91	0.00	0.00	100.15
T668	98	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.74	0.24	18.01	7.02	6.74	0.32	20.66	5.78	0.00	0.02	99.53
T668	99	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.88	0.36	19.39	4.85	8.39	0.51	18.57	7.14	0.01	0.00	100.09
T668	100	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.87	0.45	18.00	7.06	7.17	0.33	20.59	5.80	0.04	0.00	100.31
T668	101	94BCW317	till	0.25-0.5	purple	Cr-pyrope	41.04	0.31	19.02	5.85	6.92	0.39	21.21	5.15	0.02	0.00	99.88
T668	102	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.28	0.36	19.02	5.83	7.42	0.40	20.99	5.11	0.05	0.03	99.47
T668	103	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.83	0.57	18.41	5.83	7.84	0.36	20.33	5.62	0.03	0.00	99.82
T668	104	94BCW317	till	0.25-0.5	orange	almandine	36.65	0.02	19.87	0.03	29.68	2.00	2.80	7.30	0.00	0.00	98.33
T668	105	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.11	0.00	17.79	7.97	7.01	0.41	19.32	6.84	0.04	0.00	99.49
T668	106	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.00	0.38	16.07	9.02	7.44	0.38	19.40	6.71	0.02	0.01	99.43
T668	107	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.52	0.04	16.46	9.32	6.77	0.50	19.95	5.63	0.03	0.00	98.21
T668	108	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.86	0.27	17.67	6.78	7.48	0.38	19.94	6.07	0.02	0.00	98.47
T668	109	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.34	0.28	19.42	4.55	7.63	0.40	20.52	5.20	0.01	0.02	98.37
T668	110	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.90	0.32	19.02	4.57	8.54	0.41	18.38	6.82	0.01	0.00	97.97
T668	111	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.94	0.43	19.53	5.06	7.54	0.48	20.67	5.11	0.06	0.00	99.81
T668	112	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.79	0.05	18.81	6.04	7.44	0.40	19.76	5.77	0.02	0.01	98.07
T668	113	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.45	1.19	18.68	3.99	7.54	0.29	20.11	6.75	0.02	0.01	99.03
T668	114	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.24	0.05	17.16	8.07	7.96	0.54	18.26	6.58	0.05	0.01	97.90
T668	115	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.68	0.36	18.99	4.62	8.39	0.45	18.21	7.26	0.02	0.00	97.98
T668	116	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.59	0.36	18.75	5.02	8.77	0.44	17.89	7.47	0.02	0.00	98.32
T668	117	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.65	0.31	19.36	4.24	8.46	0.43	18.85	6.67	0.01	0.01	97.97
T668	118	94BCW317	till	0.25-0.5	ilky purpl	almandine	37.38	0.06	21.65	0.12	29.55	0.45	9.07	0.86	0.03	0.00	99.15
T668	119	94BCW317	till	0.25-0.5	ilky purpl	almandine	35.70	0.09	20.95	0.00	35.74	1.05	4.42	0.77	0.00	0.01	98.72
T668	120	94BCW317	till	0.25-0.5	ilky purpl	almandine	35.14	0.02	20.53	0.00	37.27	2.78	1.95	0.59	0.00	0.00	98.28
T668	121	94BCW317	till	0.25-0.5	ilky purpl	almandine	36.53	0.08	21.10	0.02	32.42	0.79	7.31	0.44	0.00	0.01	98.70

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T668	122	94BCW317	till	0.25-0.5	purple	Cr-pyrope	40.01	0.45	16.57	8.67	6.86	0.41	19.92	6.11	0.04	0.00	99.04
T668	123	94BCW317	till	0.25-0.5	purple	Cr-pyrope	39.37	0.40	16.42	8.50	7.11	0.37	19.50	6.42	0.06	0.00	98.15
T668	124	94BCW317	till	0.25-0.5	green	Cr-diopside	53.82	0.16	1.72	1.25	2.66	0.07	18.12	19.97	1.35	0.06	99.18
T668	125	94BCW317	till	0.25-0.5	green	Cr-diopside	53.37	0.14	1.62	1.20	2.52	0.05	17.70	20.81	1.27	0.06	98.75
T668	126	94BCW317	till	0.25-0.5	green	Cr-diopside	53.09	0.14	0.88	1.40	2.43	0.15	17.25	22.15	1.04	0.08	98.60
T668	127	94BCW317	till	0.25-0.5	green	HiCr-diopsid	53.53	0.23	1.39	2.46	2.41	0.13	16.62	20.45	1.72	0.04	98.98
T668	128	94BCW317	till	0.25-0.5	green	Cr-diopside	53.31	0.08	1.53	1.09	2.51	0.16	17.73	21.06	1.16	0.06	98.68
T668	129	94BCW317	till	0.25-0.5	green	HiCr-diopsid	53.36	0.20	1.18	1.64	2.41	0.09	16.92	21.59	1.21	0.03	98.63
T668	130	94BCW317	till	0.25-0.5	green	Cr-diopside	52.24	0.25	1.58	1.05	3.07	0.12	17.37	20.88	1.19	0.08	97.82
T668	131	94BCW317	till	0.25-0.5	green	Cr-diopside	53.39	0.23	1.49	0.93	2.94	0.10	17.44	21.41	1.12	0.04	99.08
T668	132	94BCW317	till	0.25-0.5	green	Cr-diopside	53.29	0.06	1.61	1.45	2.36	0.11	17.92	19.91	1.35	0.05	98.10
T668	133	94BCW317	till	0.25-0.5	green	Cr-diopside	52.75	0.15	1.42	1.00	2.37	0.10	17.95	20.92	1.11	0.04	97.80
T668	134	94BCW317	till	0.25-0.5	green	Cr-diopside	52.86	0.17	0.85	1.24	2.34	0.06	17.21	22.36	1.04	0.06	98.18
T668	135	94BCW317	till	0.25-0.5	green	HiCr-diopsid	52.64	0.27	1.65	2.07	2.66	0.12	16.41	20.02	1.80	0.04	97.67
T668	136	94BCW317	till	0.25-0.5	green	diopside	51.05	0.11	1.60	0.13	4.26	0.11	15.63	23.81	0.47	0.00	97.17
T668	137	94BCW317	till	0.25-0.5	green	Cr-diopside	53.10	0.13	1.59	1.12	2.63	0.15	17.81	20.71	1.27	0.07	98.57
T668	138	94BCW317	till	0.25-0.5	green	diopside	51.19	0.11	1.46	0.03	4.88	0.13	15.68	24.09	0.49	0.00	98.05
T668	139	94BCW317	till	0.25-0.5	green	diopside	51.17	0.07	0.88	0.05	6.04	0.15	14.33	24.41	0.35	0.00	97.45
T668	140	94BCW317	till	0.25-0.5	green	diopside	52.38	0.09	1.20	0.04	4.13	0.11	16.17	24.55	0.41	0.01	99.09
T668	141	94BCW317	till	0.25-0.5	green	diopside	51.29	0.09	0.95	0.02	5.38	0.25	14.90	23.95	0.47	0.01	97.31
T668	142	94BCW317	till	0.25-0.5	green	diopside	51.72	0.08	1.16	0.08	4.48	0.18	15.70	24.32	0.44	0.00	98.15
T668	143	94BCW317	till	0.25-0.5	green	diopside	51.87	0.06	0.91	0.07	4.61	0.18	16.00	24.31	0.40	0.03	98.43
T669	1	94BCW317	till	0.25-0.5	black	ilmenite	0.00	48.91	0.10	0.01	46.56	0.44	0.64	0.03	0.00	0.00	96.69
T669	2	94BCW317	till	0.25-0.5	black	ilmenite	0.00	49.64	0.09	0.00	47.28	0.40	0.39	0.01	0.01	0.01	97.82
T669	3	94BCW317	till	0.25-0.5	black	ilmenite	0.00	36.09	0.06	0.06	55.54	0.57	0.89	0.02	0.00	0.02	93.25
T669	4	94BCW317	till	0.25-0.5	black	ilmenite	0.03	48.13	0.01	0.00	47.47	2.08	0.04	0.05	0.00	0.00	97.82
T669	5	94BCW317	till	0.25-0.5	black	ilmenite	0.00	49.51	0.00	0.10	45.84	1.50	0.07	0.02	0.00	0.00	97.05
T669	6	94BCW317	till	0.25-0.5	black	ilmenite	0.02	49.55	0.05	0.01	47.08	0.45	0.62	0.02	0.00	0.03	97.84
T669	7	94BCW317	till	0.25-0.5	black	ilmenite	0.28	50.71	0.18	0.08	42.81	0.78	0.09	0.01	0.00	0.00	94.94
T669	8	94BCW317	till	0.25-0.5	black	ilmenite	0.06	50.02	0.08	0.00	47.01	0.56	0.32	0.02	0.00	0.00	98.08
T669	9	94BCW317	till	0.25-0.5	black	ilmenite	0.02	49.46	0.02	0.00	47.66	0.26	0.09	0.01	0.00	0.03	97.55
T669	10	94BCW317	till	0.25-0.5	black	chromite*	0.20	0.80	3.21	61.61	21.24	0.36	11.12	0.02	0.02	0.00	98.56
T669	11	94BCW317	till	0.25-0.5	black	chromite	0.10	2.24	2.11	56.56	26.20	0.45	9.34	0.02	0.00	0.00	97.02
T669	12	94BCW317	till	0.25-0.5	black	ilmenite	0.00	49.95	0.07	0.06	46.17	0.72	0.29	0.00	0.00	0.01	97.28
T669	13	94BCW317	till	0.25-0.5	black	ilmenite	0.02	47.40	0.03	0.04	47.96	1.04	0.10	0.02	0.00	0.00	96.61
T669	14	94BCW317	till	0.25-0.5	black	ilmenite	0.00	50.96	0.04	0.02	45.51	0.91	0.22	0.01	0.00	0.00	97.66
T669	15	94BCW317	till	0.25-0.5	black	ilmenite	0.05	43.21	0.10	0.02	50.72	0.72	0.33	0.00	0.01	0.03	95.20
T669	16	94BCW317	till	0.25-0.5	black	chromite	0.23	2.96	1.93	53.87	29.21	0.45	8.56	0.00	0.00	0.01	97.22
T669	17	94BCW317	till	0.25-0.5	black	chromite	0.25	4.00	4.44	50.66	27.75	0.42	9.79	0.02	0.01	0.01	97.33
T669	18	94BCW317	till	0.25-0.5	black	chromite	0.39	1.85	16.99	42.28	22.17	0.20	13.80	0.04	0.00	0.00	97.73
T669	19	94BCW317	till	0.25-0.5	black	ilmenite	0.08	51.59	0.03	0.00	45.83	0.31	0.26	0.01	0.02	0.02	98.15
T669	20	94BCW317	till	0.25-0.5	black	chromite	0.22	2.77	1.88	55.35	26.89	0.47	9.12	0.01	0.02	0.03	96.75
T669	21	94BCW317	till	0.25-0.5	black	andradite	35.22	0.84	3.51	0.00	23.02	0.63	0.16	32.31	0.02	0.00	95.71
T669	22	94BCW317	till	0.25-0.5	black	amphibole	49.38	0.27	0.70	0.00	29.79	0.93	16.16	0.63	0.02	0.00	97.88
T669	23	94BCW317	till	0.25-0.5	black	ilmenite	0.12	44.72	0.04	0.03	49.54	0.76	1.07	0.03	0.00	0.01	96.32
T669	24	94BCW317	till	0.25-0.5	black	ilmenite	0.06	49.31	0.05	0.03	46.80	0.40	0.69	0.01	0.01	0.00	97.36
T669	25	94BCW317	till	0.25-0.5	black	rutile	0.00	95.75	0.09	0.09	0.66	0.06	0.06	0.02	0.00	0.00	96.73
T669	26	94BCW317	till	0.25-0.5	black	ilmenite	0.00	48.61	0.09	0.01	47.54	0.74	0.06	0.02	0.01	0.00	97.07
T669	27	94BCW317	till	0.25-0.5	black	ilmenite	0.02	49.38	0.05	0.00	46.59	0.55	0.20	0.01	0.00	0.01	96.81
T669	28	94BCW317	till	0.25-0.5	black	ilmenite	0.02	50.86	0.07	0.01	45.82	0.76	0.14	0.00	0.00	0.00	97.67
T669	29	94BCW317	till	0.25-0.5	black	ilmenite	0.02	51.62	0.02	0.00	45.15	0.21	0.59	0.00	0.00	0.00	97.61
T669	30	94BCW317	till	0.25-0.5	black	ilmenite	0.11	48.70	0.06	0.02	47.02	0.53	0.66	0.00	0.00	0.00	97.09

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T669	31	94BCW317	till	0.25-0.5	black	Fe-Ti-oxide	1.50	11.46	0.21	0.64	68.51	0.48	0.35	0.04	0.00	0.00	83.18
T669	32	94BCW317	till	0.25-0.5	black	ilmenite	0.04	50.33	0.03	0.00	46.84	0.75	0.16	0.02	0.00	0.00	98.18
T669	33	94BCW317	till	0.25-0.5	black	ilmenite	0.09	49.04	0.06	0.00	47.51	0.61	0.16	0.02	0.07	0.00	97.55
T669	34	94BCW317	till	0.25-0.5	black	ilmenite	0.04	51.19	0.03	0.16	45.06	0.57	0.76	0.03	0.02	0.01	97.86
T669	35	94BCW317	till	0.25-0.5	black	ilmenite	0.06	49.34	0.07	0.00	46.95	0.45	0.35	0.02	0.00	0.00	97.23
T669	36	94BCW317	till	0.25-0.5	black	ilmenite	0.06	50.76	0.04	0.05	43.87	2.86	0.12	0.00	0.01	0.01	97.78
T669	37	94BCW317	till	0.25-0.5	black	ilmenite	0.03	49.83	0.09	0.00	46.62	0.35	0.69	0.02	0.00	0.02	97.66
T669	38	94BCW317	till	0.25-0.5	black	ilmenite	0.06	51.46	0.02	0.00	44.63	1.11	0.30	0.01	0.00	0.03	97.61
T669	39	94BCW317	till	0.25-0.5	black	ilmenite	0.16	47.21	0.04	0.04	44.77	4.36	0.72	0.01	0.00	0.01	97.32
T669	40	94BCW317	till	0.25-0.5	black	ilmenite	0.37	48.25	0.04	0.02	47.25	0.49	0.50	0.01	0.00	0.00	96.94
T669	41	94BCW317	till	0.25-0.5	black	ilmenite	0.02	49.16	0.07	0.03	47.09	0.56	0.45	0.00	0.00	0.00	97.38
T669	42	94BCW317	till	0.25-0.5	black	Fe-Ti-oxide	0.37	11.72	0.83	0.06	74.78	0.12	0.39	0.07	0.00	0.03	88.35
T669	43	94BCW317	till	0.25-0.5	black	ilmenite	0.05	51.62	0.02	0.00	45.69	0.92	0.19	0.01	0.00	0.02	98.52
T669	44	94BCW317	till	0.25-0.5	black	ilmenite	0.13	48.55	0.06	0.03	45.77	0.35	0.46	0.03	0.00	0.00	95.38
T669	45	94BCW317	till	0.25-0.5	grey	hematite	0.17	0.03	0.04	0.15	87.06	0.10	0.06	0.00	0.00	0.00	87.61
T669	46	94BCW317	till	0.25-0.5	black	Fe-Ti-oxide	0.21	15.28	0.08	0.09	74.16	0.17	0.05	0.00	0.00	0.00	90.03
T669	47	94BCW317	till	0.25-0.5	black	ilmenite	0.12	48.86	0.08	0.00	47.16	0.60	0.33	0.02	0.04	0.00	97.20
T669	48	94BCW317	till	0.25-0.5	black	ilmenite	0.00	47.60	0.05	0.02	47.92	1.44	0.22	0.00	0.00	0.00	97.24
T669	49	94BCW317	till	0.25-0.5	black	ilmenite	0.05	50.68	0.04	0.01	45.71	0.86	0.49	0.01	0.04	0.01	97.90
T669	50	94BCW317	till	0.25-0.5	black	ilmenite	0.08	48.81	0.05	0.09	48.28	0.27	0.61	0.00	0.00	0.00	98.19
T669	51	94BCW317	till	0.25-0.5	black	ilmenite	0.02	48.12	0.05	0.00	46.19	3.41	0.10	0.02	0.00	0.01	97.92
T669	52	94BCW317	till	0.25-0.5	black	Fe-Ti-oxide	0.14	14.08	0.10	0.05	76.57	0.39	0.03	0.02	0.00	0.01	91.38
T669	53	94BCW317	till	0.25-0.5	black	ilmenite	0.09	41.18	0.07	0.01	52.64	1.85	0.04	0.01	0.00	0.01	95.91
T669	54	94BCW317	till	0.25-0.5	black	ilmenite	0.04	49.43	0.05	0.03	47.93	0.48	0.12	0.00	0.01	0.00	98.08
T669	55	94BCW317	till	0.25-0.5	black	chromite	0.35	2.27	3.20	57.00	25.05	0.46	9.68	0.02	0.00	0.01	98.03
T669	56	94BCW317	till	0.25-0.5	black	ilmenite	0.10	39.69	0.04	0.01	52.94	0.87	0.43	0.00	0.00	0.02	94.10
T669	57	94BCW317	till	0.25-0.5	black	Fe-Ti-oxide	0.12	31.53	0.01	0.04	59.24	1.64	0.09	0.03	0.00	0.00	92.69
T669	58	94BCW317	till	0.25-0.5	black	ilmenite	0.03	48.74	0.09	0.05	47.68	0.38	0.43	0.02	0.00	0.00	97.41
T669	59	94BCW317	till	0.25-0.5	black	ilmenite	0.06	47.04	0.07	0.03	46.78	1.97	1.06	0.02	0.01	0.02	97.05
T669	60	94BCW317	till	0.25-0.5	black	rutile	0.00	97.04	0.09	0.21	0.11	0.02	0.03	0.01	0.00	0.01	97.52
T708	1	94BCW317	till	0.5-0.84	purple	Cr-pyrope	40.93	0.19	18.45	6.47	7.80	0.45	19.90	5.83	0.00	0.00	100.02
T708	2	94BCW317	till	0.5-0.84	purple	Cr-pyrope	41.08	0.44	17.16	7.34	7.64	0.36	20.08	5.88	0.03	0.00	100.01
T708	3	94BCW317	till	0.5-0.84	purple	Cr-pyrope	41.28	0.42	19.12	4.53	8.77	0.42	18.65	7.01	0.00	0.00	100.21
T708	4	94BCW317	till	0.5-0.84	purple	Cr-pyrope	41.64	0.23	16.99	8.26	7.04	0.35	20.25	5.57	0.05	0.01	100.39
T708	5	94BCW317	till	0.5-0.84	green	Cr-diopside	53.47	0.10	1.50	1.33	2.48	0.07	17.60	19.98	1.31	0.05	97.89
T708	6	94BCW317	till	0.5-0.84	green	Cr-diopside	54.07	0.17	1.53	1.26	2.57	0.08	17.61	20.32	1.31	0.05	98.97
T708	7	94BCW317	till	0.5-0.84	green	Cr-diopside	54.39	0.19	1.49	1.18	2.60	0.09	17.56	20.68	1.17	0.05	99.39
T708	8	94BCW317	till	0.5-0.84	green	Cr-diopside	54.81	0.29	1.29	1.47	2.38	0.08	17.29	20.96	1.17	0.05	99.79
T708	9	94BCW317	till	0.5-0.84	green	HiCr-diopsid	54.51	0.26	1.59	1.60	2.50	0.07	17.27	20.16	1.49	0.06	99.51
T708	10	94BCW317	till	0.5-0.84	green	HiCr-diospid	51.48	0.26	1.89	2.13	2.76	0.11	15.02	18.89	1.44	0.05	94.01
T708	11	94BCW317	till	0.5-0.84	green	Cr-diopside	53.40	0.17	1.36	0.91	2.63	0.18	18.01	20.94	0.99	0.05	98.63
T708	12	94BCW317	till	0.5-0.84	green	HiCr-diopsid	53.82	0.22	1.23	1.50	2.46	0.07	17.18	21.03	1.17	0.06	98.74
T708	13	94BCW317	till	0.5-0.84	green	Cr-diopside	54.80	0.34	1.89	1.10	2.86	0.13	16.92	19.55	1.62	0.03	99.23
T708	14	94BCW317	till	0.5-0.84	green	Cr-diopside	53.60	0.24	1.48	1.04	2.44	0.09	17.28	21.24	1.14	0.06	98.62
T708	15	94BCW317	till	0.5-0.84	pl green	enstatite	57.57	0.08	0.52	0.35	5.03	0.15	35.42	0.77	0.09	0.00	99.97
T708	16	94BCW317	till	0.5-0.84	pl green	olivine	39.70	0.05	0.04	0.06	8.69	0.12	49.97	0.07	0.00	0.01	98.70
T691	16	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.93	0.55	17.67	6.68	7.36	0.39	20.52	5.59	0.06	0.01	99.75
T691	17	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.06	0.11	18.23	5.77	7.46	0.38	20.58	5.61	0.00	0.00	99.20
T691	18	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.02	0.22	18.65	5.49	7.59	0.36	20.86	5.36	0.03	0.00	99.57
T691	19	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.54	0.27	16.35	8.84	7.14	0.43	20.35	5.77	0.02	0.02	99.73
T691	20	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.21	0.37	19.77	3.59	7.68	0.34	21.13	4.96	0.04	0.17	99.27
T691	21	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.74	0.08	17.22	7.84	7.27	0.44	19.95	6.16	0.02	0.00	99.72

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	22	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.91	0.41	18.39	5.22	8.68	0.46	18.81	6.86	0.00	0.01	99.74
T691	23	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.83	0.12	19.75	4.02	7.35	0.37	21.49	5.02	0.01	0.00	99.94
T691	24	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.91	0.07	17.92	7.10	6.97	0.36	19.97	6.25	0.00	0.01	99.58
T691	25	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.86	0.13	19.01	5.10	7.41	0.40	20.87	5.43	0.00	0.00	100.21
T691	26	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.48	0.16	16.52	8.63	7.48	0.47	19.25	6.30	0.04	0.01	100.33
T691	27	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.59	0.53	19.51	4.23	8.17	0.51	20.67	4.78	0.06	0.00	100.05
T691	28	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.14	0.39	18.92	4.62	8.43	0.47	19.48	6.55	0.00	0.01	100.01
T691	29	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.16	0.67	17.69	5.55	8.23	0.33	20.53	5.38	0.05	0.01	99.58
T691	30	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.28	0.49	18.79	4.78	7.74	0.37	20.89	5.16	0.04	0.01	99.56
T691	31	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.10	0.24	17.64	6.77	7.61	0.40	20.21	5.12	0.03	0.01	99.12
T691	32	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.81	0.37	18.75	5.03	8.76	0.45	19.04	6.57	0.02	0.02	99.83
T691	33	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.98	0.23	18.72	5.68	7.66	0.40	20.64	5.34	0.01	0.00	99.66
T691	34	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.07	0.37	16.91	7.78	7.12	0.34	20.14	5.91	0.03	0.00	99.66
T691	35	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.26	0.66	18.32	5.21	8.37	0.47	19.43	6.27	0.04	0.00	100.03
T691	36	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.20	0.31	17.54	6.68	7.23	0.39	20.32	5.79	0.03	0.02	99.52
T691	37	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.92	0.41	17.74	6.37	7.57	0.41	20.04	5.56	0.05	0.00	99.06
T691	38	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.57	0.05	19.62	4.45	7.01	0.40	21.29	4.49	0.01	0.01	98.89
T691	39	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.78	0.34	16.99	7.59	7.17	0.34	20.37	5.81	0.03	0.01	99.43
T691	40	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.59	0.23	19.51	3.94	7.71	0.43	20.77	4.97	0.01	0.01	99.18
T691	41	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.71	0.45	16.81	7.61	7.59	0.40	19.17	6.53	0.02	0.01	100.30
T691	42	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.29	0.32	18.05	6.19	7.42	0.36	20.56	5.55	0.01	0.00	99.74
T691	43	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.32	0.52	19.39	4.37	7.84	0.42	20.93	4.81	0.04	0.00	99.65
T691	44	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.63	0.31	18.23	6.00	7.58	0.36	20.47	5.60	0.01	0.00	100.17
T691	45	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.32	0.37	18.83	4.79	8.80	0.39	18.49	7.01	0.00	0.02	100.02
T691	46	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.91	0.10	17.95	6.87	7.45	0.48	20.05	5.71	0.00	0.01	99.51
T691	47	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.74	0.39	19.44	4.49	8.38	0.41	20.50	4.84	0.05	0.00	100.23
T691	48	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.48	0.50	18.88	4.74	8.10	0.46	19.37	6.55	0.03	0.00	100.11
T691	49	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.49	0.25	19.65	4.29	7.80	0.37	20.80	5.24	0.01	0.01	99.89
T691	50	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.24	0.47	18.21	5.74	8.47	0.44	18.98	6.85	0.00	0.01	100.42
T691	51	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.73	0.34	19.38	4.88	6.79	0.40	21.48	5.23	0.04	0.02	100.28
T691	52	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.94	0.63	16.40	7.64	8.05	0.31	19.76	5.95	0.07	0.01	99.75
T691	53	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.58	0.09	18.64	5.98	7.34	0.48	19.98	5.76	0.03	0.00	99.88
T691	54	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.24	0.47	17.85	6.55	7.37	0.38	20.80	5.63	0.03	0.00	100.32
T691	55	94BCW318	till	0.25-0.5	purple	Cr-pyrope	42.04	0.37	19.32	4.36	7.96	0.45	19.32	6.57	0.01	0.00	100.40
T691	56	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.79	0.28	19.05	4.85	7.01	0.36	21.09	5.23	0.03	0.00	99.66
T691	57	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.92	0.16	20.11	4.07	7.60	0.45	21.37	4.83	0.01	0.00	100.51
T691	58	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.10	0.11	19.02	5.72	7.92	0.50	20.14	5.25	0.02	0.01	99.79
T691	59	94BCW318	till	0.25-0.5	purple	Cr-pyrope	42.17	0.44	20.57	2.96	7.48	0.34	22.07	4.63	0.05	0.01	100.72
T691	60	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.26	0.28	19.33	4.48	7.74	0.49	21.38	4.61	0.04	0.01	99.62
T691	61	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.08	0.40	17.40	7.35	7.45	0.41	20.07	5.70	0.05	0.01	99.92
T691	62	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.33	0.27	17.33	7.18	7.25	0.37	20.17	5.81	0.02	0.01	99.72
T691	63	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.94	0.45	17.35	6.69	7.82	0.41	19.74	5.90	0.00	0.00	99.30
T691	64	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.30	0.17	19.21	5.12	7.35	0.46	21.03	4.99	0.04	0.00	99.67
T691	65	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.11	0.37	18.65	4.81	8.56	0.46	19.41	6.32	0.00	0.01	99.70
T691	66	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.40	0.07	19.54	4.89	7.53	0.40	20.95	5.03	0.01	0.01	99.82
T691	67	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.76	0.40	20.27	3.24	7.86	0.41	21.27	4.38	0.04	0.01	99.63
T691	68	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.43	0.43	19.28	4.70	7.68	0.48	20.96	4.78	0.05	0.01	99.79
T691	69	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.70	0.01	18.67	6.61	7.31	0.56	22.50	2.63	0.02	0.01	100.01
T691	70	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.68	0.14	17.90	6.50	7.63	0.32	20.17	5.79	0.02	0.00	100.14
T691	71	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.95	0.41	19.58	3.61	7.66	0.38	21.47	4.87	0.02	0.01	99.97
T691	72	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.20	0.37	19.27	4.52	7.75	0.37	21.09	4.82	0.04	0.00	99.44
T691	73	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.46	0.53	18.77	4.97	8.18	0.41	19.39	6.31	0.04	0.00	100.07

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	74	94BCW318	till	0.25-0.5	purple	Cr-pyrope	42.43	0.41	20.30	3.00	8.08	0.31	21.59	4.66	0.03	0.00	100.80
T691	75	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.75	0.50	16.95	7.20	8.24	0.40	18.58	7.29	0.04	0.00	99.94
T691	76	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.13	0.46	17.47	6.98	7.46	0.43	20.41	5.74	0.02	0.00	100.11
T691	77	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.54	0.09	16.44	8.93	7.71	0.55	18.75	6.60	0.01	0.01	99.63
T691	78	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.96	0.05	17.16	8.12	7.88	0.50	18.62	6.72	0.00	0.01	100.03
T691	79	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.31	0.12	18.93	4.95	8.58	0.41	19.31	6.52	0.05	0.00	100.19
T691	80	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.19	0.35	18.69	5.02	8.71	0.41	18.70	6.97	0.02	0.00	100.05
T691	81	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.24	0.43	18.77	4.87	8.46	0.46	19.44	6.38	0.00	0.01	100.06
T691	82	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.01	0.35	18.84	4.88	8.72	0.43	18.87	6.84	0.02	0.00	99.97
T691	83	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.27	0.38	16.83	8.18	7.24	0.35	20.45	5.80	0.02	0.01	100.52
T691	84	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.81	0.21	17.08	8.08	7.28	0.37	19.63	6.25	0.00	0.01	99.72
T691	85	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.22	0.19	17.11	7.69	7.16	0.44	20.08	5.57	0.03	0.03	99.50
T691	86	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.50	0.14	19.66	4.44	7.80	0.37	20.98	5.09	0.03	0.00	100.00
T691	87	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.10	0.03	16.68	8.99	7.19	0.43	18.95	6.82	0.00	0.00	100.17
T691	88	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.41	0.06	19.91	4.52	8.69	0.48	18.94	6.03	0.02	0.00	100.06
T691	89	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.77	0.09	16.81	8.79	7.40	0.50	19.03	6.45	0.02	0.00	99.87
T691	90	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.44	0.35	18.65	5.32	8.28	0.41	19.75	6.17	0.00	0.01	100.37
T691	91	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.57	0.27	20.53	2.79	7.88	0.37	21.40	4.64	0.03	0.01	99.48
T691	92	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.43	0.18	18.81	5.76	7.31	0.40	20.87	5.13	0.02	0.01	99.90
T691	93	94BCW318	till	0.25-0.5	purple	Cr-pyrope	42.38	0.23	19.61	4.46	7.09	0.38	21.26	4.99	0.01	0.02	100.42
T691	94	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.50	0.27	19.06	5.26	7.33	0.40	20.92	5.22	0.01	0.00	99.97
T691	95	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.35	0.65	14.88	10.63	6.76	0.43	19.36	6.84	0.03	0.01	99.95
T691	96	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.95	0.44	18.80	4.43	8.24	0.42	19.79	5.92	0.04	0.00	99.04
T691	97	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.42	0.37	19.15	4.40	8.45	0.36	20.03	5.82	0.02	0.03	100.04
T691	98	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.98	0.43	15.83	9.38	7.48	0.34	19.60	6.28	0.06	0.01	100.40
T691	99	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.20	0.33	17.56	7.11	7.37	0.41	20.34	5.58	0.04	0.01	99.95
T691	100	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.42	0.41	14.51	11.06	6.71	0.38	19.76	6.36	0.03	0.01	99.64
T691	101	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.29	0.04	17.68	7.75	7.90	0.58	20.07	5.01	0.01	0.00	100.32
T691	102	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.08	0.39	17.02	7.52	7.47	0.41	20.01	6.03	0.01	0.00	99.95
T691	103	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.59	0.35	19.51	4.09	8.01	0.43	19.85	6.15	0.01	0.02	100.00
T691	104	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.77	0.02	19.43	5.16	8.06	0.47	20.08	5.55	0.01	0.00	100.56
T691	105	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.18	0.02	17.03	8.23	7.15	0.47	20.09	5.81	0.03	0.00	100.02
T691	106	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.64	0.40	17.69	6.51	8.39	0.34	18.72	6.92	0.03	0.00	100.63
T691	107	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.56	0.27	18.23	6.61	7.66	0.41	20.65	5.44	0.03	0.00	100.87
T691	108	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.86	0.36	18.97	4.74	8.85	0.47	18.54	7.09	0.00	0.00	100.89
T691	109	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.45	0.35	18.04	6.46	7.64	0.42	19.93	5.66	0.02	0.02	99.99
T691	110	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.27	0.31	18.37	4.81	12.20	0.60	16.65	6.57	0.00	0.01	99.78
T691	111	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.31	0.31	17.05	6.63	8.54	0.31	19.48	5.94	0.02	0.01	99.60
T691	112	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.40	0.62	14.92	10.18	7.17	0.39	19.08	6.74	0.08	0.00	99.59
T691	113	94BCW318	till	0.25-0.5	red	Cr-pyrope	41.30	0.35	18.34	5.48	8.43	0.39	19.63	6.04	0.00	0.00	99.97
T691	114	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.15	0.18	17.73	6.89	7.62	0.36	20.36	5.17	0.03	0.01	99.49
T691	115	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.92	0.27	18.89	4.72	8.71	0.44	18.60	6.96	0.00	0.00	99.51
T691	116	94BCW318	till	0.25-0.5	pl purple	Cr-pyrope	40.84	0.04	19.87	3.51	7.46	0.38	14.17	13.70	0.02	0.00	100.00
T691	117	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.77	0.30	19.90	3.85	7.89	0.28	21.14	4.95	0.03	0.01	100.12
T691	118	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.03	0.51	17.42	6.93	7.57	0.38	19.50	6.49	0.01	0.01	99.84
T691	119	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.42	0.34	18.58	5.18	8.36	0.36	19.37	5.67	0.00	0.00	99.29
T691	120	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.23	0.41	16.56	8.03	7.13	0.40	20.27	5.72	0.03	0.00	99.78
T691	121	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.48	0.00	18.34	6.59	7.95	0.52	19.55	5.75	0.01	0.00	100.18
T691	122	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.19	0.00	19.09	5.62	8.36	0.48	19.62	5.96	0.00	0.01	100.32
T691	123	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.52	0.09	18.09	7.00	7.83	0.46	19.63	6.13	0.00	0.02	100.77
T691	124	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.87	0.31	17.81	6.71	6.58	0.41	21.19	5.67	0.03	0.00	100.59
T691	125	94BCW318	till	0.25-0.5	purple	Cr-pyrope	40.01	0.34	14.54	10.67	7.28	0.51	18.81	7.05	0.03	0.00	99.26

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T691	126	94BCW318	till	0.25-0.5	purple	Cr-pyrope	42.05	0.39	18.95	4.88	7.60	0.38	20.87	5.34	0.03	0.02	100.51
T691	127	94BCW318	till	0.25-0.5	purple	Cr-pyrope	41.19	0.04	17.03	8.32	7.62	0.59	19.13	6.45	0.00	0.01	100.38
T692	1	94BCW318	till	0.25-0.5	green	Cr-diopside	54.55	0.31	1.67	1.38	2.55	0.09	17.57	20.68	1.42	0.05	100.26
T692	2	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.30	0.13	1.48	1.60	2.58	0.04	17.88	20.05	1.44	0.07	99.55
T692	3	94BCW318	till	0.25-0.5	green	Cr-diopside	55.02	0.09	1.31	1.11	2.66	0.15	18.04	21.01	1.08	0.05	100.51
T692	4	94BCW318	till	0.25-0.5	green	Cr-diopside	54.47	0.33	2.74	0.56	2.99	0.08	17.18	19.33	1.99	0.03	99.69
T692	5	94BCW318	till	0.25-0.5	green	Cr-diopside	55.16	0.16	1.36	1.24	2.66	0.13	17.92	20.95	1.19	0.07	100.83
T692	6	94BCW318	till	0.25-0.5	green	Cr-diopside	55.63	0.22	1.28	1.45	2.44	0.11	17.29	21.30	1.38	0.05	101.14
T692	7	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.89	0.18	1.61	1.56	2.39	0.11	17.41	20.86	1.40	0.05	100.44
T692	8	94BCW318	till	0.25-0.5	green	Cr-diopside	54.65	0.18	0.90	1.38	2.36	0.08	17.26	22.32	1.10	0.04	100.26
T692	9	94BCW318	till	0.25-0.5	green	Cr-diopside	55.20	0.21	1.66	1.27	2.63	0.03	17.68	20.67	1.33	0.05	100.72
T692	10	94BCW318	till	0.25-0.5	green	Cr-diopside	54.90	0.21	1.61	1.19	2.69	0.08	17.75	20.45	1.29	0.05	100.22
T692	11	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.81	0.08	1.97	2.32	2.62	0.09	16.84	18.93	2.13	0.03	99.83
T692	12	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.81	0.09	2.15	2.33	2.47	0.09	16.30	19.23	2.29	0.00	99.75
T692	13	94BCW318	till	0.25-0.5	green	Cr-diopside	54.54	0.18	1.47	1.30	2.56	0.13	17.63	21.26	1.18	0.06	100.30
T692	14	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.85	0.10	1.70	2.13	2.61	0.10	16.87	19.96	1.68	0.05	100.06
T692	15	94BCW318	till	0.25-0.5	green	Cr-diopside	54.03	0.07	1.50	1.30	2.61	0.08	17.54	20.88	1.21	0.06	99.28
T692	16	94BCW318	till	0.25-0.5	green	Cr-diopside	54.85	0.31	1.80	0.88	2.77	0.11	17.32	20.34	1.54	0.02	99.93
T692	17	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.56	0.12	1.53	2.58	3.48	0.14	16.12	19.10	2.12	0.05	99.80
T692	18	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.26	0.25	1.60	1.88	2.38	0.08	17.01	20.94	1.47	0.05	99.94
T692	19	94BCW318	till	0.25-0.5	green	Cr-diopside	54.22	0.18	1.49	1.01	2.88	0.11	17.43	21.09	1.20	0.05	99.66
T692	20	94BCW318	till	0.25-0.5	green	Cr-diopside	53.92	0.06	1.80	0.65	4.66	0.15	16.44	22.23	0.77	0.01	100.69
T692	21	94BCW318	till	0.25-0.5	green	HiCr-diopsid	55.25	0.05	0.25	1.77	1.80	0.09	17.34	23.51	0.97	0.04	101.06
T692	22	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.70	0.23	1.35	1.98	2.53	0.10	17.03	20.87	1.60	0.03	100.43
T692	23	94BCW318	till	0.25-0.5	green	Cr-diopside	56.15	0.00	1.41	1.15	2.58	0.08	18.16	21.18	1.07	0.05	101.83
T692	24	94BCW318	till	0.25-0.5	green	Cr-diopside	54.65	0.22	1.23	0.93	2.93	0.08	18.12	21.29	0.96	0.02	100.43
T692	25	94BCW318	till	0.25-0.5	green	Cr-diopside	55.34	0.17	1.38	1.12	2.90	0.14	18.53	20.08	1.09	0.06	100.80
T692	26	94BCW318	till	0.25-0.5	green	Cr-diopside	54.62	0.09	1.62	1.10	2.78	0.10	18.28	20.31	1.38	0.03	100.31
T692	27	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.95	0.23	1.50	2.91	2.45	0.14	17.02	19.10	2.03	0.03	100.37
T692	28	94BCW318	till	0.25-0.5	green	Cr-diopside	55.16	0.15	0.90	1.00	2.52	0.11	17.41	22.71	0.97	0.03	100.96
T692	29	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.77	0.12	0.36	1.54	2.01	0.09	17.55	22.84	0.95	0.02	100.25
T692	30	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.83	0.25	1.36	2.53	2.45	0.11	16.71	20.09	1.81	0.04	100.18
T692	31	94BCW318	till	0.25-0.5	green	Cr-diopside	52.47	0.12	1.68	1.10	5.35	0.04	17.04	19.63	0.95	0.06	98.43
T692	32	94BCW318	till	0.25-0.5	green	Cr-diopside	54.58	0.19	1.45	1.31	2.77	0.09	18.24	20.12	1.38	0.06	100.18
T692	33	94BCW318	till	0.25-0.5	green	Cr-diopside	55.16	0.10	1.25	1.11	2.78	0.11	18.34	20.76	1.06	0.06	100.71
T692	34	94BCW318	till	0.25-0.5	green	Cr-diopside	54.81	0.17	1.35	1.18	2.70	0.12	17.89	21.54	1.05	0.05	100.86
T692	35	94BCW318	till	0.25-0.5	green	Cr-diopside	55.05	0.21	1.28	1.31	2.59	0.10	17.04	21.75	1.22	0.04	100.59
T692	36	94BCW318	till	0.25-0.5	green	Cr-diopside	54.62	0.22	1.29	1.36	2.51	0.10	17.33	21.78	1.19	0.05	100.45
T692	37	94BCW318	till	0.25-0.5	green	Cr-diopside	54.42	0.22	0.83	1.21	2.55	0.12	17.03	22.33	0.99	0.04	99.72
T692	38	94BCW318	till	0.25-0.5	green	Cr-diopside	55.26	0.15	0.44	1.46	2.30	0.13	17.31	22.27	1.14	0.03	100.49
T692	39	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.87	0.27	1.30	2.11	2.46	0.11	16.87	20.59	1.71	0.03	100.31
T692	40	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.51	0.29	1.55	1.68	2.58	0.13	16.90	20.34	1.73	0.03	99.73
T692	41	94BCW318	till	0.25-0.5	green	HiCr-diopsid	53.90	0.25	1.44	2.21	2.50	0.12	16.86	20.30	1.70	0.04	99.29
T692	42	94BCW318	till	0.25-0.5	green	Diopside	53.24	0.04	1.26	0.42	5.83	0.24	15.63	22.09	0.78	0.00	99.54
T692	43	94BCW318	till	0.25-0.5	green	Cr-diopside	54.62	0.01	1.30	1.14	2.67	0.12	18.34	20.90	1.09	0.07	100.28
T692	44	94BCW318	till	0.25-0.5	green	Cr-diopside	55.25	0.13	1.62	1.25	2.54	0.08	18.08	20.83	1.26	0.05	101.10
T692	45	94BCW318	till	0.25-0.5	green	HiCr-diopsid	55.78	0.17	1.17	1.67	2.50	0.11	17.33	21.74	1.25	0.04	101.75
T692	46	94BCW318	till	0.25-0.5	green	HiCr-diopsid	53.93	0.23	1.22	2.10	2.30	0.10	16.78	21.41	1.37	0.04	99.48
T692	47	94BCW318	till	0.25-0.5	green	Cr-diopside	54.83	0.03	1.27	1.09	2.62	0.11	18.03	21.42	1.07	0.05	100.51
T692	48	94BCW318	till	0.25-0.5	green	Cr-diopside	54.86	0.05	1.36	1.10	2.69	0.14	17.68	21.51	1.11	0.05	100.56
T692	49	94BCW318	till	0.25-0.5	green	HiCr-diopsid	55.18	0.24	1.62	2.46	2.68	0.11	16.81	19.82	1.91	0.06	100.91
T692	50	94BCW318	till	0.25-0.5	green	HiCr-diopsid	55.40	0.01	1.58	2.55	1.86	0.09	16.97	20.29	1.78	0.00	100.53

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T692	51	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.49	0.04	1.77	3.39	2.08	0.09	16.46	18.77	2.36	0.04	99.49
T692	52	94BCW318	till	0.25-0.5	green	Cr-diopside	54.77	0.08	1.61	1.38	2.62	0.12	17.42	20.92	1.40	0.04	100.35
T692	53	94BCW318	till	0.25-0.5	green	Cr-diopside	55.13	0.03	1.19	1.24	2.88	0.06	18.24	20.73	1.10	0.10	100.68
T692	54	94BCW318	till	0.25-0.5	green	Cr-diopside	54.79	0.20	1.48	1.03	2.66	0.13	17.87	20.88	1.17	0.06	100.26
T692	55	94BCW318	till	0.25-0.5	green	HiCr-diopsid	54.91	0.24	1.44	1.54	2.67	0.07	17.21	20.72	1.38	0.06	100.22
T692	56	94BCW318	till	0.25-0.5	green	Cr-diopside	55.06	0.21	1.64	1.24	2.61	0.11	17.80	20.75	1.35	0.04	100.80
T692	57	94BCW318	till	0.25-0.5	green	Cr-diopside	54.87	0.23	1.66	1.33	2.54	0.07	17.51	20.87	1.36	0.04	100.47
T692	58	94BCW318	till	0.25-0.5	green	Cr-diopside	54.28	0.21	1.48	1.48	2.60	0.08	17.19	21.25	1.27	0.07	99.91
T692	59	94BCW318	till	0.25-0.5	green	Cr-diopside	54.70	0.14	2.12	0.95	2.72	0.13	17.34	20.05	1.74	0.00	99.89
T692	60	94BCW318	till	0.25-0.5	green	Cr-diopside	55.17	0.11	1.52	1.32	2.59	0.07	17.60	20.95	1.36	0.04	100.74
T692	61	94BCW318	till	0.25-0.5	black	chromite*	0.13	0.82	1.54	68.30	19.79	0.33	10.58	0.00	0.00	0.01	101.51
T692	62	94BCW318	till	0.25-0.5	black	chromite	0.06	2.10	0.85	61.22	27.76	0.48	8.54	0.00	0.00	0.00	101.00
T692	63	94BCW318	till	0.25-0.5	black	chromite	0.11	3.61	5.21	52.45	28.03	0.43	10.03	0.01	0.01	0.01	99.90
T692	64	94BCW318	till	0.25-0.5	black	chromite	0.06	2.67	2.93	56.14	28.87	0.44	8.95	0.01	0.00	0.02	100.09
T692	65	94BCW318	till	0.25-0.5	black	Rutile	0.06	95.56	0.07	0.09	1.86	0.03	0.01	0.02	0.00	0.03	97.71
T692	66	94BCW318	till	0.25-0.5	black	Ilmenite	0.05	52.40	0.03	0.04	47.28	2.02	0.06	0.02	0.00	0.02	101.91
T692	67	94BCW318	till	0.25-0.5	black	Ilmenite	0.04	53.44	0.05	0.05	47.12	0.22	0.49	0.00	0.00	0.00	101.42
T692	68	94BCW318	till	0.25-0.5	black	chromite	0.08	4.31	3.43	52.58	30.79	0.31	9.28	0.04	0.00	0.00	100.81
T692	69	94BCW318	till	0.25-0.5	black	Mg-Ilmenite	0.07	53.39	0.41	5.84	26.42	0.33	13.73	0.01	0.04	0.00	100.25
T692	70	94BCW318	till	0.25-0.5	black	chromite*	0.07	0.12	7.37	64.21	18.11	0.30	10.80	0.01	0.00	0.01	100.99
T692	71	94BCW318	till	0.25-0.5	black	chromite	0.13	4.10	5.37	53.95	25.31	0.36	10.98	0.03	0.01	0.02	100.25
T692	72	94BCW318	till	0.25-0.5	black	Ilmenite	0.06	48.61	0.03	0.02	50.67	2.07	0.06	0.02	0.01	0.00	101.54
T692	73	94BCW318	till	0.25-0.5	black	chromite*	0.08	0.14	8.35	63.68	17.76	0.34	11.16	0.03	0.09	0.02	101.65
T692	74	94BCW318	till	0.25-0.5	black	chromite	0.10	4.35	4.11	53.33	28.18	0.35	9.81	0.02	0.00	0.00	100.26
T692	75	94BCW318	till	0.25-0.5	black	Ilmenite	0.07	51.64	0.07	0.00	49.33	0.60	0.15	0.00	0.01	0.00	101.87
T692	76	94BCW318	till	0.25-0.5	black	Ilmenite	0.06	52.42	0.08	0.06	48.02	0.44	0.32	0.02	0.00	0.01	101.42
T692	77	94BCW318	till	0.25-0.5	black	Ilmenite	0.05	48.38	0.04	0.07	49.39	2.36	0.07	0.02	0.00	0.00	100.37
T692	78	94BCW318	till	0.25-0.5	black	chromite*	0.12	0.00	8.06	64.04	16.96	0.35	11.75	0.04	0.01	0.01	101.34
T692	79	94BCW318	till	0.25-0.5	black	Ilmenite	0.09	51.86	0.04	0.05	47.67	0.52	0.53	0.03	0.04	0.02	100.85
T692	80	94BCW318	till	0.25-0.5	black	Mg-Ilmenite	0.06	51.57	0.39	5.80	29.25	0.32	12.52	0.04	0.00	0.01	99.96
T692	81	94BCW318	till	0.25-0.5	black	Ilmenite	0.19	53.01	0.05	0.03	47.08	0.53	0.30	0.07	0.00	0.02	101.27
T692	82	94BCW318	till	0.25-0.5	black	chromite*	0.08	0.00	7.70	64.33	17.17	0.26	11.57	0.02	0.00	0.00	101.12
T692	83	94BCW318	till	0.25-0.5	black	Ilmenite	0.09	44.07	0.04	0.03	53.32	3.03	0.06	0.02	0.00	0.02	100.68
T692	84	94BCW318	till	0.25-0.5	black	chromite	0.08	3.81	2.37	54.45	30.04	0.44	9.29	0.01	0.02	0.00	100.51
T692	85	94BCW318	till	0.25-0.5	black	Ilmenite	0.08	45.53	0.08	0.21	53.24	0.72	0.40	0.01	0.00	0.00	100.28
T692	86	94BCW318	till	0.25-0.5	black	Ilmenite	0.06	49.94	0.05	0.04	49.45	1.25	0.12	0.02	0.04	0.00	100.97
T692	87	94BCW318	till	0.25-0.5	black	chromite	0.12	3.58	6.62	55.12	23.67	0.35	11.24	0.03	0.00	0.01	100.74
T692	88	94BCW318	till	0.25-0.5	black	Ilmenite	0.09	50.12	0.04	0.02	48.60	1.52	0.07	0.30	0.00	0.00	100.76
T692	89	94BCW318	till	0.25-0.5	black	chromite*	0.10	0.09	6.06	63.82	19.04	0.31	11.55	0.00	0.00	0.01	100.99
T708	17	94BCW318	till	0.5-0.84	purple	Cr-pyrope	42.24	0.12	18.94	5.76	7.79	0.40	20.83	4.99	0.02	0.01	101.10
T708	18	94BCW318	till	0.5-0.84	purple	Cr-pyrope	40.65	0.36	17.81	6.64	8.06	0.42	19.57	5.80	0.01	0.00	99.31
T708	19	94BCW318	till	0.5-0.84	purple	Cr-pyrope	41.32	0.25	18.16	6.12	7.49	0.35	20.44	5.51	0.02	0.01	99.67
T708	20	94BCW318	till	0.5-0.84	purple	Cr-pyrope	41.48	0.28	21.07	2.74	8.48	0.46	21.12	4.16	0.01	0.00	99.80
T708	21	94BCW318	till	0.5-0.84	black	Ti-chromite	0.24	4.32	3.44	51.04	29.61	0.41	9.37	0.00	0.00	0.00	98.42
T708	22	94BCW318	till	0.5-0.84	orange	almandine	37.87	0.05	20.75	0.02	28.00	1.32	3.48	8.93	0.00	0.00	100.41
T708	23	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.99	0.30	1.60	1.63	2.63	0.11	17.51	20.29	1.63	0.04	99.71
T708	24	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.69	0.16	1.63	1.67	2.47	0.10	17.14	20.21	1.45	0.05	98.56
T708	25	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.58	0.26	1.33	2.20	2.39	0.10	16.91	20.30	1.66	0.05	98.78
T708	26	94BCW318	till	0.5-0.84	green	Cr-diopside	53.75	0.22	1.25	1.17	3.13	0.08	16.61	21.42	1.09	0.02	98.73
T708	27	94BCW318	till	0.5-0.84	green	Cr-diopside	54.02	0.20	0.87	1.34	2.35	0.05	17.35	21.64	1.05	0.05	98.93
T708	28	94BCW318	till	0.5-0.84	green	Cr-diopside	55.01	0.14	1.63	1.33	2.52	0.09	18.26	19.15	1.34	0.06	99.51
T708	29	94BCW318	till	0.5-0.84	green	Cr-diopside	53.90	0.05	1.31	1.08	2.58	0.10	17.71	20.77	1.03	0.05	98.58

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	30	94BCW318	till	0.5-0.84	green	Cr-diopside	54.09	0.07	1.66	1.32	2.60	0.07	17.51	20.11	1.25	0.05	98.73
T708	31	94BCW318	till	0.5-0.84	green	Cr-diopside	53.59	0.11	0.77	0.77	2.59	0.10	17.36	22.13	0.86	0.03	98.29
T708	32	94BCW318	till	0.5-0.84	green	Cr-diopside	53.09	0.18	1.63	1.39	2.40	0.11	17.47	20.16	1.40	0.05	97.87
T708	33	94BCW318	till	0.5-0.84	green	Cr-diopside	52.90	0.20	1.38	1.01	2.81	0.15	17.86	20.72	1.10	0.06	98.18
T708	34	94BCW318	till	0.5-0.84	green	Cr-diopside	54.49	0.22	1.34	1.27	2.55	0.09	17.40	21.22	1.17	0.05	99.78
T708	35	94BCW318	till	0.5-0.84	green	HiCr-diopsid	52.91	0.20	1.13	2.33	2.28	0.05	16.56	20.61	1.48	0.05	97.61
T708	36	94BCW318	till	0.5-0.84	green	Cr-diopside	53.10	0.17	1.59	1.22	2.65	0.11	17.40	20.47	1.30	0.05	98.04
T708	37	94BCW318	till	0.5-0.84	green	Cr-diopside	49.76	0.26	1.39	1.25	2.30	0.09	14.44	18.42	1.02	0.06	89.00
T708	38	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.46	0.26	1.57	1.96	2.49	0.13	16.40	19.61	1.75	0.03	97.65
T708	39	94BCW318	till	0.5-0.84	green	Cr-diopside	53.56	0.24	1.70	1.08	2.37	0.11	17.35	20.56	1.33	0.05	98.36
T708	40	94BCW318	till	0.5-0.84	green	Cr-diopside	54.49	0.12	1.33	1.11	2.55	0.12	17.68	20.84	1.07	0.06	99.37
T708	41	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.47	0.18	1.71	2.92	2.24	0.10	16.88	18.62	2.05	0.05	98.20
T708	42	94BCW318	till	0.5-0.84	green	HiCr-diopsid	53.81	0.32	1.88	2.24	2.58	0.08	16.54	19.36	1.93	0.03	98.76
T708	43	94BCW318	till	0.5-0.84	green	Cr-diopside	53.47	0.15	1.33	1.24	2.65	0.11	18.01	20.37	1.09	0.04	98.46
T708	44	94BCW318	till	0.5-0.84	green	Cr-diopside	53.91	0.09	1.48	1.36	2.60	0.14	18.07	20.14	1.22	0.06	99.07
T708	45	94BCW318	till	0.5-0.84	green	Cr-diopside	54.31	0.08	1.28	1.15	2.64	0.11	18.21	20.57	1.06	0.05	99.45
T708	46	94BCW318	till	0.5-0.84	green	Cr-diopside	54.33	0.25	1.30	1.40	2.36	0.07	17.20	21.18	1.22	0.03	99.33
T708	47	94BCW318	till	0.5-0.84	green	Cr-diopside	53.58	0.12	1.12	1.06	3.07	0.09	17.77	20.09	0.95	0.06	97.91
T708	48	94BCW318	till	0.5-0.84	pl green	enstatite	57.25	0.07	1.05	0.32	4.93	0.16	36.06	0.31	0.00	0.03	100.16
T708	49	94BCW318	till	0.5-0.84	pl green	olivine	39.92	0.01	0.03	0.04	8.75	0.10	49.51	0.03	0.00	0.00	98.38
T669	61	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.21	0.03	15.70	10.57	7.46	0.59	17.51	7.67	0.01	0.02	99.76
T669	62	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.50	0.11	20.19	4.56	7.35	0.39	20.49	5.29	0.02	0.01	99.91
T669	63	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.43	0.20	16.81	8.52	6.95	0.39	19.71	6.12	0.00	0.02	99.14
T669	64	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.09	0.09	16.31	9.40	7.57	0.40	19.00	5.86	0.03	0.02	98.76
T669	65	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.15	0.24	14.74	10.14	9.47	0.49	15.87	7.94	0.03	0.02	98.09
T669	66	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.44	0.17	19.88	4.68	7.41	0.39	20.60	5.52	0.02	0.00	100.11
T669	67	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.45	0.09	18.59	6.55	7.06	0.39	20.41	5.62	0.00	0.01	100.17
T669	68	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.56	0.06	18.21	7.19	6.95	0.47	19.98	5.92	0.00	0.00	99.33
T669	69	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.10	0.27	15.70	9.44	7.17	0.39	18.90	6.83	0.03	0.00	98.83
T669	70	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.89	0.31	20.26	4.30	7.29	0.37	20.76	5.00	0.02	0.00	100.20
T669	71	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.93	0.02	18.01	7.90	7.07	0.50	20.60	4.60	0.00	0.01	99.63
T669	72	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.03	0.74	14.87	9.58	7.32	0.39	19.05	6.91	0.01	0.00	98.89
T669	73	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.21	0.07	19.32	6.04	7.21	0.36	19.95	5.76	0.00	0.01	99.92
T669	74	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.89	0.07	17.46	7.48	7.26	0.43	19.24	5.87	0.02	0.00	97.72
T669	75	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.30	0.30	20.53	3.64	7.73	0.35	20.99	5.04	0.03	0.00	100.89
T669	76	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.10	0.02	18.11	7.74	7.33	0.54	19.85	5.35	0.02	0.01	100.06
T669	77	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.89	0.20	21.21	3.35	7.96	0.40	21.18	4.58	0.02	0.01	100.80
T669	78	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.52	0.21	19.96	4.57	7.81	0.33	20.55	5.21	0.00	0.01	100.15
T669	79	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.77	0.35	20.33	3.71	7.41	0.39	21.19	4.98	0.03	0.01	100.18
T669	80	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.88	0.21	20.55	4.06	7.92	0.40	20.85	4.58	0.06	0.02	100.52
T669	81	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.45	0.26	21.66	3.06	7.66	0.35	21.50	4.47	0.04	0.01	101.45
T669	82	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.16	0.14	15.46	9.71	7.02	0.41	18.63	7.35	0.02	0.03	98.93
T669	83	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.16	0.01	18.39	6.98	7.49	0.34	19.45	6.41	0.00	0.00	100.21
T669	84	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.82	0.01	17.48	8.34	7.24	0.51	20.35	4.68	0.01	0.00	99.43
T669	85	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.43	0.36	21.49	2.02	8.16	0.32	20.80	4.30	0.04	0.02	98.94
T669	86	94BCW319	till	0.25-0.5	purple	almandine	37.01	0.05	20.98	0.02	31.98	0.93	5.10	2.91	0.00	0.02	98.98
T669	87	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.51	0.16	19.86	4.56	7.26	0.32	20.30	5.27	0.03	0.00	99.27
T669	88	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.29	0.64	17.96	6.50	7.43	0.47	19.93	5.43	0.07	0.00	98.70
T669	89	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.46	0.47	19.96	3.88	7.67	0.45	20.62	5.35	0.03	0.01	99.90
T669	90	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.95	0.46	18.81	5.61	7.82	0.43	19.20	6.40	0.06	0.00	99.73
T669	91	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.50	0.39	19.37	4.92	8.35	0.40	18.22	7.11	0.03	0.01	99.29
T669	92	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.88	0.05	19.38	5.98	6.49	0.46	21.00	4.52	0.04	0.01	98.80

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	Al2O3	Cr2O	FeO	MnO	MgO	CaO	Na2O	K2O	TOTAL
T669	93	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.75	0.40	19.19	4.86	7.81	0.47	19.21	6.21	0.03	0.02	98.95
T669	94	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.38	0.03	18.25	7.91	7.28	0.47	21.67	3.11	0.00	0.00	100.09
T669	95	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.57	0.05	17.62	7.78	7.15	0.46	19.24	6.18	0.00	0.01	99.06
T669	96	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.91	0.36	19.31	4.82	8.31	0.40	18.58	6.90	0.00	0.01	99.59
T669	97	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.11	0.51	19.35	5.04	7.71	0.44	18.86	7.16	0.02	0.00	100.20
T669	98	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.32	0.36	19.58	4.58	8.52	0.47	18.70	6.99	0.00	0.01	100.53
T669	99	94BCW319	till	0.25-0.5		*plucked*											
T669	100	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.07	0.38	19.04	5.00	8.56	0.37	18.53	7.12	0.00	0.04	100.10
T669	101	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.37	0.29	18.92	5.66	7.92	0.39	19.63	6.40	0.04	0.02	100.65
T669	102	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.03	0.01	16.31	9.89	6.88	0.39	18.82	7.03	0.00	0.00	100.36
T669	103	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.58	0.62	18.50	6.42	7.03	0.36	20.46	5.51	0.05	0.00	100.53
T669	104	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.57	0.24	21.89	2.58	8.05	0.48	21.47	4.35	0.03	0.01	101.65
T669	105	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.70	0.32	19.92	4.68	6.82	0.35	20.93	5.24	0.02	0.00	99.98
T669	106	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.55	0.06	16.24	9.43	6.73	0.40	19.48	6.16	0.04	0.37	99.45
T669	107	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.25	0.35	19.52	4.85	8.52	0.39	18.43	7.09	0.00	0.02	100.41
T669	108	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.19	0.01	18.75	6.82	7.27	0.51	21.19	4.06	0.00	0.01	99.80
T669	109	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.00	0.06	17.61	8.08	7.03	0.47	19.71	5.96	0.02	0.01	99.95
T669	110	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.31	0.05	17.76	7.74	7.08	0.50	19.41	5.78	0.02	0.01	98.66
T669	111	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.81	0.14	19.66	5.62	7.70	0.46	20.50	5.39	0.02	0.01	101.31
T669	112	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.68	0.29	19.21	4.70	8.04	0.38	18.63	6.75	0.02	0.02	98.71
T669	113	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.06	0.42	19.71	4.38	8.10	0.36	19.47	6.28	0.05	0.06	99.88
T669	114	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.43	0.00	19.40	5.35	7.68	0.56	19.37	5.98	0.02	0.02	98.81
T669	115	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.94	0.81	15.10	9.60	7.58	0.42	17.97	7.51	0.05	0.01	98.99
T669	116	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.21	0.44	17.27	7.46	6.98	0.32	19.49	5.99	0.03	0.01	98.21
T669	117	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.76	0.29	17.71	7.43	7.04	0.33	20.01	6.11	0.01	0.00	99.67
T669	118	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.49	0.30	18.09	6.51	6.72	0.36	20.49	5.45	0.02	0.00	98.44
T669	119	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.15	0.02	20.91	4.06	7.47	0.43	20.57	4.82	0.01	0.00	99.45
T669	120	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.99	0.02	16.65	9.81	6.46	0.41	20.79	4.43	0.00	0.00	99.56
T669	121	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.76	0.22	14.76	10.80	7.19	0.46	18.54	6.80	0.04	0.00	98.56
T669	122	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.69	0.36	18.95	4.91	8.52	0.39	18.36	7.14	0.01	0.00	99.35
T669	123	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.95	0.03	18.18	7.51	6.62	0.36	19.56	6.39	0.01	0.01	99.62
T669	124	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.39	0.35	19.49	4.92	8.31	0.39	19.10	6.36	0.01	0.00	100.32
T669	125	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.23	0.58	15.23	10.04	7.44	0.47	18.83	6.60	0.04	0.01	99.47
T669	126	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.07	0.57	18.97	4.97	8.35	0.46	18.46	6.86	0.03	0.01	99.74
T669	127	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.72	0.25	19.68	5.04	7.38	0.34	20.68	5.10	0.06	0.00	100.24
T669	128	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.63	0.00	17.16	8.75	6.95	0.44	19.69	6.32	0.02	0.00	99.96
T669	129	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.60	0.11	18.77	5.84	7.30	0.34	20.19	5.61	0.01	0.01	99.77
T669	130	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.99	0.34	19.27	4.84	8.02	0.39	19.07	6.70	0.00	0.01	99.62
T669	131	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.40	0.31	18.95	5.45	7.97	0.44	18.88	6.50	0.02	0.03	99.94
T669	132	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.82	0.24	20.10	4.59	6.94	0.33	20.97	5.08	0.04	0.02	100.13
T669	133	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.35	0.24	18.60	6.48	7.51	0.47	20.04	5.45	0.04	0.00	100.17
T669	134	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.83	0.35	18.73	5.98	6.96	0.37	20.31	5.59	0.04	0.01	100.16
T669	135	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.44	0.02	18.79	6.69	7.32	0.57	20.01	5.21	0.02	0.00	100.06
T669	136	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.96	0.36	18.13	6.66	6.99	0.42	20.07	5.73	0.04	0.01	99.36
T669	137	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.28	0.45	18.99	4.68	8.03	0.41	18.70	6.30	0.03	0.01	97.89
T669	138	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.40	0.41	20.10	4.22	7.42	0.38	21.19	5.03	0.03	0.00	100.16
T669	139	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.31	0.28	16.08	8.16	7.28	0.43	18.77	6.37	0.00	0.01	96.71
T669	140	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.22	0.33	18.98	5.41	7.08	0.34	20.65	5.20	0.02	0.02	99.26
T669	141	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.73	0.35	19.21	4.98	8.52	0.50	19.45	5.55	0.02	0.00	99.30
T669	142	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.81	0.41	13.88	11.94	6.88	0.43	18.27	7.48	0.03	0.00	99.12
T669	143	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.30	0.07	17.28	8.31	7.35	0.49	19.31	5.81	0.01	0.03	98.95
T669	144	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.88	0.31	18.51	6.21	7.18	0.36	20.26	5.44	0.06	0.01	99.22

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T669	145	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.50	0.02	18.66	6.78	8.05	0.51	20.77	3.51	0.00	0.01	98.79
T669	146	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.21	0.04	19.39	5.19	8.95	0.68	17.99	6.38	0.00	0.01	98.84
T669	147	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.66	0.08	17.90	7.23	9.18	0.48	18.54	5.06	0.00	0.00	99.12
T669	148	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.71	0.00	17.55	7.94	6.90	0.41	20.54	5.03	0.00	0.00	99.09
T669	149	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.73	0.23	17.60	7.60	7.11	0.35	19.94	5.96	0.03	0.00	99.55
T669	150	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.04	0.40	18.34	6.27	7.64	0.46	19.19	6.35	0.00	0.00	99.69
T669	151	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.32	0.01	17.38	8.13	7.57	0.45	18.55	6.60	0.00	0.00	99.00
T669	152	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.70	0.42	17.67	7.01	7.02	0.32	19.94	5.71	0.04	0.00	98.83
T669	153	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.73	0.04	17.70	7.85	7.44	0.44	19.44	5.96	0.02	0.00	99.61
T669	154	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.70	0.46	17.20	7.83	6.79	0.30	20.23	5.76	0.02	0.01	99.28
T669	155	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.98	0.34	20.99	2.82	7.59	0.39	21.13	4.91	0.04	0.01	100.20
T669	156	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.50	0.45	19.63	4.63	7.94	0.52	19.48	6.29	0.03	0.02	100.49
T669	157	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.47	0.02	17.99	7.21	7.30	0.41	19.31	6.19	0.02	0.00	98.91
T669	158	94BCW319	till	0.25-0.5		*missed grain*	0.07	0.01	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.12
T669	159	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.34	0.50	19.24	5.31	7.17	0.35	20.56	5.52	0.05	0.02	100.05
T670	1	94BCW319	till	0.25-0.5	green	Cr-diopside	54.74	0.09	1.42	1.05	2.65	0.03	17.91	21.29	1.09	0.04	100.31
T670	2	94BCW319	till	0.25-0.5	green	Cr-diopside	54.24	0.18	1.04	1.42	2.41	0.07	17.32	21.96	1.15	0.08	99.86
T670	3	94BCW319	till	0.25-0.5	green	Cr-diopside	54.93	0.13	1.51	1.01	2.55	0.09	18.10	21.07	1.10	0.06	100.55
T670	4	94BCW319	till	0.25-0.5	green	Cr-diopside	54.50	0.17	1.73	1.36	2.53	0.12	17.39	20.29	1.38	0.05	99.51
T670	5	94BCW319	till	0.25-0.5	emerald	Cr-diopside	54.57	0.14	1.47	1.26	2.50	0.09	17.41	21.15	1.16	0.07	99.82
T670	6	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.13	0.20	1.71	1.50	2.48	0.12	17.17	20.91	1.42	0.03	99.66
T670	7	94BCW319	till	0.25-0.5	green	Cr-diopside	54.63	0.20	0.88	1.30	2.21	0.08	17.42	22.19	1.00	0.03	99.92
T670	8	94BCW319	till	0.25-0.5	green	Cr-diopside	54.22	0.18	1.71	1.21	2.47	0.14	17.43	20.35	1.36	0.06	99.13
T670	9	94BCW319	till	0.25-0.5	green	Cr-diopside	54.73	0.10	1.33	1.14	2.48	0.10	18.43	20.89	1.10	0.08	100.38
T670	10	94BCW319	till	0.25-0.5	green	Cr-diopside	54.73	0.16	1.59	1.29	2.47	0.10	17.69	20.33	1.41	0.05	99.82
T670	11	94BCW319	till	0.25-0.5	green	Cr-diopside	54.21	0.19	1.71	1.22	2.50	0.12	17.57	20.64	1.35	0.03	99.54
T670	12	94BCW319	till	0.25-0.5	green	Cr-diopside	54.42	0.25	1.38	1.22	2.51	0.03	17.58	21.24	1.15	0.04	99.82
T670	13	94BCW319	till	0.25-0.5	green	Cr-diopside	53.83	0.09	1.21	1.00	2.45	0.13	17.01	20.37	0.89	0.06	97.03
T670	14	94BCW319	till	0.25-0.5	green	Cr-diopside	54.26	0.15	1.58	1.26	2.43	0.10	17.57	20.66	1.30	0.04	99.33
T670	15	94BCW319	till	0.25-0.5	green	Cr-diopside	53.89	0.12	1.26	1.06	2.40	0.12	17.81	20.95	1.02	0.08	98.71
T670	16	94BCW319	till	0.25-0.5	green	Cr-diopside	54.29	0.16	1.70	1.30	2.38	0.09	17.33	20.90	1.42	0.04	99.61
T670	17	94BCW319	till	0.25-0.5	green	Cr-diopside	54.67	0.19	0.95	1.34	2.38	0.11	17.45	22.32	1.01	0.04	100.47
T670	18	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.14	0.04	2.15	2.68	2.17	0.12	16.44	19.29	2.25	0.02	99.30
T670	19	94BCW319	till	0.25-0.5	green	diopside	53.28	0.06	1.08	0.09	5.72	0.32	15.35	23.78	0.48	0.00	100.15
T670	20	94BCW319	till	0.25-0.5	green	Cr-diopside	54.89	0.18	1.63	1.37	2.52	0.11	17.65	20.78	1.35	0.06	100.53
T670	21	94BCW319	till	0.25-0.5	green	Cr-diopside	54.27	0.21	1.75	1.31	2.68	0.11	17.68	20.10	1.50	0.07	99.68
T670	22	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.12	0.27	2.39	1.69	2.72	0.15	16.64	19.21	2.03	0.02	99.24
T670	23	94BCW319	till	0.25-0.5	green	Cr-diopside	54.82	0.16	1.69	1.27	2.54	0.08	17.76	20.52	1.31	0.06	100.20
T670	24	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.82	0.10	0.33	1.76	1.97	0.09	17.57	22.42	1.05	0.02	100.13
T670	25	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.48	0.24	1.41	2.34	2.36	0.16	16.72	20.08	1.82	0.03	99.63
T670	26	94BCW319	till	0.25-0.5	green	Cr-diopside	54.05	0.15	1.56	1.24	2.51	0.08	17.74	20.64	1.35	0.04	99.36
T670	27	94BCW319	till	0.25-0.5	green	Cr-diopside	54.89	0.15	1.57	1.08	2.79	0.08	18.25	20.53	1.25	0.04	100.62
T670	28	94BCW319	till	0.25-0.5	green	Cr-diopside	54.56	0.07	1.40	1.24	2.53	0.05	17.97	20.97	1.13	0.05	99.97
T670	29	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.47	0.10	1.62	1.56	2.47	0.08	17.72	20.45	1.25	0.06	99.78
T670	30	94BCW319	till	0.25-0.5	green	Cr-diopside	54.31	0.19	1.72	1.30	2.44	0.14	17.47	20.91	1.41	0.04	99.90
T670	31	94BCW319	till	0.25-0.5	emerald	HiCr-diopsid	54.42	0.19	0.99	1.58	2.01	0.09	17.33	22.04	1.11	0.02	99.77
T670	32	94BCW319	till	0.25-0.5	green	Cr-diopside	54.36	0.29	2.18	1.18	2.60	0.08	17.42	19.65	1.77	0.02	99.54
T670	33	94BCW319	till	0.25-0.5	green	Cr-diopside	54.13	0.15	1.38	1.19	2.55	0.13	18.08	21.38	1.15	0.06	100.20
T670	34	94BCW319	till	0.25-0.5	green	Cr-diopside	54.40	0.13	1.62	1.15	2.59	0.13	17.56	20.45	1.31	0.04	99.37
T670	35	94BCW319	till	0.25-0.5	green	Cr-diopside	54.10	0.10	1.38	1.30	2.54	0.11	17.85	20.91	1.16	0.06	99.50
T670	36	94BCW319	till	0.25-0.5	green	Cr-diopside	54.38	0.12	1.41	1.10	2.44	0.07	17.71	21.16	1.12	0.06	99.55
T670	37	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.46	0.22	1.26	1.59	2.24	0.13	17.28	21.10	1.42	0.02	99.72

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	38	94BCW319	till	0.25-0.5	green	Cr-diopside	54.53	0.16	1.69	1.33	2.61	0.12	17.56	20.59	1.43	0.05	100.07
T670	39	94BCW319	till	0.25-0.5	green	Cr-diopside	53.17	0.16	1.60	0.60	4.17	0.14	17.53	21.94	0.39	0.00	99.70
T670	40	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.32	0.08	1.95	2.37	2.40	0.12	16.90	18.89	2.00	0.02	99.03
T670	41	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.42	0.11	1.74	2.97	2.33	0.12	16.86	19.14	2.19	0.03	99.91
T670	42	94BCW319	till	0.25-0.5	green	Cr-diopside	54.17	0.11	1.43	1.28	2.51	0.08	17.52	21.16	1.12	0.02	99.41
T670	43	94BCW319	till	0.25-0.5	green	Cr-diopside	54.09	0.24	1.34	1.39	2.32	0.11	17.45	21.21	1.20	0.04	99.39
T670	44	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.83	0.22	1.39	2.25	2.23	0.10	16.65	20.46	1.72	0.03	98.88
T670	45	94BCW319	till	0.25-0.5	green	Cr-diopside	53.77	0.19	1.70	1.28	2.27	0.12	17.56	20.63	1.45	0.06	99.02
T670	46	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.06	0.22	1.29	2.80	2.30	0.09	16.36	20.74	1.66	0.07	99.59
T670	47	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.83	0.24	1.35	2.14	2.42	0.11	16.87	20.54	1.71	0.00	99.18
T670	48	94BCW319	till	0.25-0.5	green	Cr-diopside	54.06	0.21	1.64	1.09	2.51	0.11	17.72	20.75	1.35	0.05	99.49
T670	49	94BCW319	till	0.25-0.5	green	Cr-diopside	54.38	0.13	1.43	1.17	2.53	0.05	17.69	21.22	1.11	0.07	99.76
T670	50	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.54	0.23	1.28	1.61	2.37	0.10	17.32	21.52	1.32	0.04	100.30
T670	51	94BCW319	till	0.25-0.5	green	Cr-diopside	54.33	0.13	1.36	1.10	2.59	0.08	18.07	21.34	1.08	0.04	100.10
T670	52	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.67	0.06	1.97	2.86	2.22	0.07	16.61	19.09	2.25	0.04	99.85
T670	53	94BCW319	till	0.25-0.5	green	Cr-diopside	54.71	0.20	0.83	1.32	2.33	0.08	17.13	22.61	1.04	0.03	100.27
T670	54	94BCW319	till	0.25-0.5	green	Cr-diopside	54.54	0.20	1.57	0.94	2.38	0.13	17.67	21.32	1.20	0.05	100.00
T670	55	94BCW319	till	0.25-0.5	green	Cr-diopside	54.38	0.16	1.42	1.04	2.38	0.10	17.92	21.28	1.12	0.06	99.85
T670	56	94BCW319	till	0.25-0.5	green	Cr-diopside	54.51	0.11	1.53	1.24	2.50	0.13	18.16	20.22	1.24	0.04	99.68
T670	57	94BCW319	till	0.25-0.5	black	chromite	0.23	3.34	3.98	55.77	23.97	0.39	10.98	0.06	0.00	0.01	98.71
T670	58	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.10	0.07	0.02	47.23	0.40	0.44	0.01	0.00	0.01	98.27
T670	59	94BCW319	till	0.25-0.5	black	ilmenite	0.06	45.43	0.04	0.02	48.92	0.95	0.56	0.03	0.00	0.01	96.01
T670	60	94BCW319	till	0.25-0.5	black	ilmenite	0.00	52.53	0.04	0.01	45.13	1.00	0.34	0.03	0.00	0.00	99.08
T670	61	94BCW319	till	0.25-0.5	black	ilmenite	0.00	51.73	0.04	0.03	44.40	1.95	0.14	0.00	0.05	0.01	98.32
T670	62	94BCW319	till	0.25-0.5	black	chromite	0.18	2.27	1.22	52.74	32.61	0.50	7.35	0.01	0.00	0.00	96.88
T670	63	94BCW319	till	0.25-0.5	black	Fe-Ti-oxide	0.06	16.84	0.11	0.08	73.61	0.22	0.17	0.02	0.00	0.02	91.11
T670	64	94BCW319	till	0.25-0.5	black	ilmenite	0.00	51.33	0.02	0.00	45.30	1.44	0.19	0.00	0.00	0.01	98.28
T670	65	94BCW319	till	0.25-0.5	black	ilmenite	0.01	51.66	0.02	0.00	44.93	0.97	0.46	0.00	0.02	0.01	98.09
T670	66	94BCW319	till	0.25-0.5	black	chromite	0.15	3.46	1.93	53.45	29.08	0.47	9.00	0.03	0.00	0.00	97.57
T670	67	94BCW319	till	0.25-0.5	black	ilmenite	0.00	49.94	0.08	0.04	47.24	0.51	0.20	0.01	0.00	0.01	98.03
T670	68	94BCW319	till	0.25-0.5	black	ilmenite	0.08	50.10	0.08	0.02	46.28	0.41	0.67	0.01	0.00	0.00	97.64
T670	69	94BCW319	till	0.25-0.5	black	ilmenite	0.00	47.81	0.03	0.00	48.81	1.54	0.05	0.01	0.00	0.00	98.24
T670	70	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.27	0.09	0.03	47.23	0.47	0.41	0.02	0.00	0.03	98.53
T670	71	94BCW319	till	0.25-0.5	black	ilmenite	0.00	51.55	0.04	0.02	46.03	0.37	0.26	0.00	0.02	0.00	98.29
T670	72	94BCW319	till	0.25-0.5	black	ilmenite	0.48	51.67	0.02	0.04	43.54	2.06	0.14	0.04	0.00	0.00	97.98
T670	73	94BCW319	till	0.25-0.5	black	ilmenite	0.05	50.58	0.04	0.02	46.54	0.53	0.37	0.03	0.00	0.01	98.17
T670	74	94BCW319	till	0.25-0.5	black	ilmenite	0.00	49.87	0.06	0.00	46.86	0.73	0.46	0.01	0.00	0.02	98.00
T670	75	94BCW319	till	0.25-0.5	black	*mixture?*	38.71	0.60	9.00	17.28	6.82	0.46	15.04	11.54	0.07	0.00	99.51
T670	76	94BCW319	till	0.25-0.5	black	chromite	0.63	2.46	1.69	58.31	25.21	0.47	9.69	0.02	0.00	0.00	98.47
T670	77	94BCW319	till	0.25-0.5	black	chromite	0.06	3.12	1.88	54.57	28.76	0.43	9.16	0.00	0.01	0.00	97.98
T670	78	94BCW319	till	0.25-0.5	black	chromite	0.26	3.42	1.97	53.93	28.34	0.43	9.41	0.03	0.00	0.00	97.79
T670	79	94BCW319	till	0.25-0.5	black	ilmenite	0.00	49.82	0.07	0.01	46.88	0.65	0.13	0.01	0.00	0.02	97.60
T670	80	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.58	0.07	0.00	46.71	0.55	0.41	0.01	0.00	0.00	98.32
T670	81	94BCW319	till	0.25-0.5	black	ilmenite	0.00	51.14	0.08	0.00	45.23	2.00	0.09	0.02	0.00	0.01	98.57
T670	82	94BCW319	till	0.25-0.5	black	Mg-ilmenite	0.00	50.98	0.57	5.34	26.81	0.29	13.34	0.02	0.00	0.00	97.34
T670	83	94BCW319	till	0.25-0.5	black	ilmenite	0.00	41.35	0.02	0.00	54.17	1.61	0.12	0.00	0.00	0.01	97.27
T670	84	94BCW319	till	0.25-0.5	black	ilmenite	0.03	46.51	0.05	0.02	48.80	0.83	1.06	0.02	0.00	0.00	97.31
T670	85	94BCW319	till	0.25-0.5	orange	almandine	37.32	0.15	21.03	0.00	27.83	2.10	1.11	10.69	0.00	0.00	100.23
T708	50	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.81	0.12	18.14	6.90	6.93	0.35	20.39	5.52	0.00	0.01	99.15
T708	51	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.69	0.22	17.47	7.34	7.04	0.38	20.03	5.80	0.02	0.01	98.98
T708	52	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.68	0.05	18.39	6.51	7.58	0.50	19.29	6.07	0.02	0.00	100.07
T708	53	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.81	0.02	20.50	4.02	6.34	0.33	22.63	4.44	0.02	0.01	100.11

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	54	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.86	0.38	17.40	7.30	7.31	0.39	19.84	5.51	0.05	0.01	99.05
T708	55	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.29	0.08	18.43	6.06	7.25	0.36	20.19	5.50	0.02	0.01	99.20
T708	56	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.80	0.09	18.43	6.47	7.39	0.40	19.73	5.88	0.00	0.00	99.19
T708	57	94BCW319	till	0.5-0.84	purple	almandine	37.71	0.05	20.96	0.03	31.33	1.09	6.22	1.65	0.01	0.00	99.04
T708	58	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.13	0.22	21.04	2.45	7.31	0.39	21.85	4.56	0.00	0.01	99.96
T708	59	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.35	0.39	18.79	4.98	8.46	0.40	19.23	6.37	0.00	0.00	98.96
T708	60	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.28	0.31	17.16	7.80	7.05	0.44	20.52	5.60	0.00	0.01	99.16
T708	61	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.57	0.09	18.78	6.25	7.85	0.59	20.03	4.76	0.00	0.00	99.91
T708	62	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.76	0.27	18.77	5.11	8.49	0.44	18.90	6.91	0.03	0.01	99.67
T708	63	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.02	0.34	18.72	4.96	8.57	0.44	18.46	6.96	0.00	0.00	99.47
T708	64	94BCW319	till	0.5-0.84	green	Cr-diopside	53.75	0.11	1.46	1.26	2.56	0.11	17.90	20.87	1.15	0.04	99.22
T708	65	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.69	0.29	1.67	1.52	2.58	0.09	17.17	20.23	1.67	0.02	98.91
T708	66	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.14	0.16	1.32	2.78	2.44	0.08	16.78	19.48	1.89	0.04	98.10
T708	67	94BCW319	till	0.5-0.84	green	Cr-diopside	53.95	0.18	1.52	1.27	2.41	0.14	18.09	20.21	1.32	0.04	99.11
T708	68	94BCW319	till	0.5-0.84	green	Cr-diopside	54.52	0.31	1.46	1.25	2.52	0.09	17.53	20.87	1.20	0.06	99.79
T708	69	94BCW319	till	0.5-0.84	green	Cr-diopside	53.24	0.06	1.28	1.11	2.61	0.07	17.52	20.63	1.06	0.05	97.62
T708	70	94BCW319	till	0.5-0.84	green	Cr-diopside	54.30	0.18	1.53	1.14	2.68	0.11	17.44	20.15	1.23	0.05	98.81
T708	71	94BCW319	till	0.5-0.84	green	Cr-diopside	53.76	0.26	1.42	0.83	2.86	0.07	17.13	20.83	1.17	0.04	98.37
T708	72	94BCW319	till	0.5-0.84	green	Cr-diopside	53.46	0.32	1.64	1.09	2.73	0.12	17.01	20.14	1.51	0.04	98.06
T708	73	94BCW319	till	0.5-0.84	green	Cr-diopside	53.96	0.29	1.28	1.01	2.72	0.12	18.02	20.65	1.02	0.08	99.15
T708	74	94BCW319	till	0.5-0.84	green	Cr-diopside	53.44	0.24	1.70	1.33	2.46	0.10	17.11	20.25	1.39	0.05	98.06
T708	75	94BCW319	till	0.5-0.84	green	Cr-diopside	54.60	0.17	1.66	1.40	2.56	0.05	17.38	20.26	1.44	0.04	99.58
T708	76	94BCW319	till	0.5-0.84	green	Cr-diopside	53.16	0.10	1.44	1.04	2.94	0.10	18.33	19.75	1.12	0.05	98.03
T708	77	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.05	0.12	1.23	2.81	2.20	0.09	16.64	19.24	1.76	0.02	98.14
T708	78	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.28	0.11	1.60	1.53	2.54	0.06	17.24	20.29	1.43	0.05	99.11
T708	79	94BCW319	till	0.5-0.84	green	Cr-diopside	52.18	0.30	1.84	0.56	3.04	0.09	16.91	19.18	1.05	0.08	95.23
T708	80	94BCW319	till	0.5-0.84	green	Cr-diopside	54.78	0.24	1.62	1.32	2.61	0.08	17.45	20.24	1.29	0.06	99.69
T708	81	94BCW319	till	0.5-0.84	green	Cr-diopside	54.01	0.12	1.42	1.05	2.96	0.11	17.56	20.01	1.17	0.06	98.48
T708	82	94BCW319	till	0.5-0.84	pl green	enstatite	56.41	0.01	1.30	0.45	4.44	0.08	36.20	0.18	0.00	0.00	99.08
T708	83	94BCW319	till	0.5-0.84	pl green	olivine	40.64	0.00	0.04	0.04	8.38	0.10	49.27	0.05	0.00	0.00	98.52
T708	84	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.78	0.00	19.30	5.61	8.03	0.50	19.95	5.15	0.00	0.01	100.34
T708	85	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.28	0.04	18.03	7.28	8.21	0.47	18.64	6.84	0.00	0.01	100.82
T708	86	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.94	0.23	17.69	7.29	7.11	0.39	20.42	5.62	0.02	0.00	99.70
T708	87	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.94	0.16	17.45	7.66	6.87	0.44	20.39	5.50	0.00	0.01	99.41
T708	88	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.54	0.39	18.93	5.03	8.19	0.40	19.12	6.35	0.02	0.01	99.98
T708	89	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.24	0.49	18.67	5.28	8.16	0.48	18.95	6.65	0.05	0.00	99.98
T708	90	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.28	0.02	16.10	9.43	7.11	0.39	18.83	7.30	0.01	0.01	99.48
T708	91	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.93	0.28	17.70	6.75	7.18	0.34	20.36	5.96	0.00	0.00	99.51
T708	92	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.56	0.38	16.32	8.53	7.01	0.36	19.77	6.11	0.02	0.01	99.07
T708	93	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.75	0.33	19.01	4.55	8.56	0.39	18.82	6.66	0.00	0.00	99.07
T708	94	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.85	0.49	16.69	8.07	7.00	0.36	20.25	5.92	0.00	0.01	99.65
T708	95	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.04	0.38	21.01	2.32	7.81	0.36	21.48	4.61	0.00	0.01	100.00
T708	96	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.10	0.27	19.64	4.37	7.60	0.42	20.85	4.90	0.03	0.00	99.18
T708	97	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.02	0.14	16.79	8.00	6.95	0.40	19.76	5.86	0.00	0.00	97.93
T708	98	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.51	0.21	17.95	6.53	7.04	0.38	20.22	5.52	0.05	0.00	99.39
T708	99	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.54	0.32	17.41	7.15	6.94	0.41	20.17	5.63	0.01	0.01	98.59
T708	100	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.50	0.21	20.05	3.90	7.90	0.35	20.78	4.57	0.01	0.00	99.26
T708	101	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.79	0.47	16.41	8.12	7.87	0.43	18.24	6.50	0.00	0.01	98.82
T708	102	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.04	0.24	18.46	6.06	7.02	0.37	20.92	5.25	0.00	0.00	99.35
T708	103	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.45	0.22	18.56	6.07	6.64	0.35	21.66	5.26	0.02	0.00	99.23
T708	104	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.06	0.13	17.72	7.09	6.98	0.37	20.28	5.55	0.02	0.01	99.21
T708	105	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.75	0.17	20.24	3.94	7.26	0.39	21.27	4.78	0.01	0.00	98.81

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T708	106	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.10	0.48	17.70	6.23	7.51	0.38	20.28	5.51	0.00	0.01	98.20
T708	107	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.54	0.24	20.03	4.20	7.86	0.37	21.05	4.90	0.00	0.02	101.20
T708	108	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.80	0.26	19.41	4.60	7.93	0.41	20.34	5.03	0.03	0.01	99.82
T708	109	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.06	0.22	17.66	6.42	10.82	0.53	17.61	6.34	0.01	0.02	99.67
T708	110	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.49	0.39	18.67	5.03	8.24	0.44	19.12	6.26	0.01	0.00	99.64
T708	111	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.91	0.00	19.46	5.03	7.25	0.43	20.71	5.01	0.01	0.01	99.81
T708	112	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.24	0.36	17.17	7.74	7.30	0.47	19.73	5.66	0.01	0.01	99.70
T708	113	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.83	0.04	18.65	6.76	7.06	0.45	22.91	2.27	0.00	0.01	98.99
T708	114	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.88	0.05	21.04	3.22	7.62	0.39	20.92	4.19	0.04	0.17	98.50
T708	115	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.87	0.15	15.96	9.11	7.31	0.39	19.28	6.37	0.00	0.01	99.43
T708	116	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.91	0.37	18.19	5.97	7.49	0.32	20.58	5.33	0.05	0.00	99.20
T708	117	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.22	0.08	15.97	9.54	6.79	0.43	19.83	6.14	0.00	0.00	99.01
T708	118	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.48	0.03	16.37	9.34	6.79	0.43	19.47	6.13	0.03	0.00	99.06
T708	119	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.50	0.34	19.12	4.32	8.66	0.45	18.05	6.99	0.01	0.01	98.45
T708	120	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.57	0.38	18.60	4.97	8.00	0.42	19.20	6.38	0.02	0.00	98.54
T708	121	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.06	0.25	18.20	5.05	7.76	0.34	20.21	5.47	0.02	0.01	97.37
T708	122	94BCW319	till	0.5-0.84	purple	Cr-pyrope	39.98	0.05	18.18	6.57	7.53	0.41	19.33	5.94	0.03	0.00	98.01
T708	123	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.19	0.57	18.54	4.80	8.33	0.30	20.20	5.28	0.04	0.00	99.26
T708	124	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.17	0.42	19.87	3.88	7.37	0.40	21.29	4.68	0.01	0.02	99.11
T708	125	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.04	0.38	20.71	2.70	7.57	0.40	21.74	4.61	0.01	0.00	100.14
T708	126	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.30	0.00	16.03	9.62	7.73	0.54	17.36	7.70	0.00	0.01	99.30
T708	127	94BCW319	till	0.5-0.84	redish	Cr-pyrope	41.88	0.29	21.25	2.07	7.94	0.39	21.08	4.76	0.01	0.01	99.67
T708	128	94BCW319	till	0.5-0.84	ong-rd	pyrope	42.56	0.67	21.19	1.43	8.37	0.35	21.60	4.30	0.06	0.01	100.52
T709	1	94BCW319	till	0.5-0.84	green	Cr-diopside	54.40	0.19	1.80	0.77	3.08	0.09	17.55	20.20	1.43	0.03	99.54
T709	2	94BCW319	till	0.5-0.84	green	Cr-diopside	55.09	0.16	1.36	1.08	2.63	0.11	17.94	20.82	1.07	0.04	100.29
T709	3	94BCW319	till	0.5-0.84	green	HiCr-diopsid	55.01	0.17	1.70	2.00	2.35	0.14	17.36	18.94	1.52	0.05	99.22
T709	4	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.13	0.17	1.52	2.21	2.36	0.10	16.95	20.02	1.62	0.03	99.10
T709	5	94BCW319	till	0.5-0.84	green	Cr-diopside	54.33	0.31	1.50	1.05	2.84	0.12	17.69	20.56	1.16	0.05	99.60
T709	6	94BCW319	till	0.5-0.84	green	Cr-diopside	54.11	0.09	1.36	1.24	2.64	0.09	17.68	20.65	1.07	0.06	98.98
T709	7	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.66	0.09	0.38	1.71	1.67	0.05	17.33	22.74	0.96	0.00	99.58
T709	8	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.91	0.27	1.64	2.09	2.61	0.04	16.85	19.48	1.83	0.05	99.78
T709	9	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.23	0.19	1.31	1.57	2.32	0.13	17.13	21.07	1.21	0.04	99.18
T709	10	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.86	0.23	1.26	1.78	2.29	0.13	16.70	20.11	1.43	0.04	98.84
T709	11	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.64	0.10	1.45	1.58	2.23	0.09	17.27	20.41	1.28	0.11	98.15
T709	12	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.93	0.24	1.65	1.74	2.82	0.11	16.87	19.50	1.72	0.04	98.61
T709	13	94BCW319	till	0.5-0.84	green	Cr-diopside	53.35	0.06	1.51	1.32	2.61	0.08	17.67	20.20	1.21	0.06	98.05
T709	14	94BCW319	till	0.5-0.84	green	Cr-diopside	54.83	0.07	1.28	1.10	2.56	0.09	17.98	20.80	1.06	0.06	99.81
T709	15	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.58	0.19	1.62	1.61	2.60	0.12	17.37	20.14	1.40	0.07	98.69
T709	16	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.65	0.06	2.54	2.01	2.70	0.16	16.06	18.32	2.37	0.01	98.87
T709	17	94BCW319	till	0.5-0.84	green	Cr-diopside	54.85	0.07	1.16	1.02	2.67	0.06	18.62	20.75	0.93	0.07	100.20
T709	18	94BCW319	till	0.5-0.84	green	Cr-diopside	54.75	0.15	1.60	1.26	2.59	0.10	17.22	20.15	1.26	0.05	99.11
T709	19	94BCW319	till	0.5-0.84	green	Cr-diopside	54.17	0.13	1.41	0.74	2.94	0.09	18.73	19.84	1.01	0.07	99.14
T709	20	94BCW319	till	0.5-0.84	green	Cr-diopside	53.12	0.10	0.38	1.32	1.76	0.07	17.27	22.85	0.72	0.05	97.64
T709	21	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.39	0.25	1.70	2.44	2.68	0.13	16.99	19.20	1.95	0.02	99.74
T709	22	94BCW319	till	0.5-0.84	green	Cr-diopside	54.63	0.11	1.28	1.09	2.76	0.10	18.47	20.21	1.01	0.07	99.71
T709	23	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.02	0.12	1.13	1.74	2.37	0.08	17.60	20.71	1.18	0.04	99.00
T709	24	94BCW319	till	0.5-0.84	green	Cr-diopside	54.48	0.11	1.40	1.24	2.57	0.11	17.79	20.52	1.09	0.06	99.37
T709	25	94BCW319	till	0.5-0.84	green	Cr-diopside	54.33	0.22	1.63	1.34	2.58	0.09	17.78	20.17	1.32	0.05	99.49
T709	26	94BCW319	till	0.5-0.84	green	Cr-diopside	54.45	0.11	1.43	1.30	2.66	0.09	18.14	20.06	1.20	0.06	99.49
T709	27	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.30	0.26	1.21	1.77	2.31	0.08	17.34	20.51	1.44	0.02	99.22
T709	28	94BCW319	till	0.5-0.84	green	Cr-diopside	52.21	0.04	1.38	1.13	2.82	0.10	17.65	20.38	1.02	0.06	96.78
T709	29	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.02	0.18	1.63	1.69	2.71	0.08	16.93	19.35	1.75	0.03	97.37

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	30	94BCW319	till	0.5-0.84	green	Cr-diopside	53.51	0.18	1.55	1.31	2.60	0.09	17.08	20.65	1.34	0.04	98.36
T709	31	94BCW319	till	0.5-0.84	green	Cr-diopside	52.65	0.18	1.20	1.37	2.48	0.10	16.90	20.91	1.14	0.05	96.98
T709	32	94BCW319	till	0.5-0.84	green	Cr-diopside	53.82	0.18	1.59	0.69	2.81	0.09	18.32	19.91	1.06	0.05	98.53
T709	33	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.74	0.24	1.35	1.86	2.48	0.14	16.99	20.09	1.57	0.03	98.48
T709	34	94BCW319	till	0.5-0.84	green	Cr-diopside	53.59	0.12	1.40	1.12	2.84	0.13	17.95	19.77	1.14	0.05	98.10
T709	35	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.55	0.26	1.33	1.93	2.51	0.13	16.77	20.04	1.62	0.04	99.18
T709	36	94BCW319	till	0.5-0.84	green	Cr-diopside	54.61	0.15	1.53	1.19	2.65	0.09	17.43	19.95	1.24	0.05	98.88
T709	37	94BCW319	till	0.5-0.84	green	Cr-diopside	53.53	0.10	1.52	1.29	2.52	0.11	17.64	20.70	1.18	0.06	98.64
T709	38	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.74	0.20	1.27	2.31	2.12	0.13	16.25	20.49	1.61	0.02	99.15
T709	39	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.58	0.02	1.39	1.84	1.96	0.12	17.35	20.37	1.40	0.02	98.04
T709	40	94BCW319	till	0.5-0.84	green	Cr-diopside	53.28	0.15	1.41	1.17	2.39	0.10	17.38	20.85	1.09	0.06	97.87
T709	41	94BCW319	till	0.5-0.84	green	HiCr-diospid	51.61	0.33	1.44	1.81	2.61	0.11	16.37	19.62	1.56	0.30	95.75
T709	42	94BCW319	till	0.5-0.84	green	Cr-diopside	55.11	0.15	0.39	1.25	1.95	0.05	17.55	22.99	0.80	0.02	100.24
T709	43	94BCW319	till	0.5-0.84	green	Cr-diopside	53.77	0.13	1.45	1.30	2.57	0.10	17.71	20.40	1.14	0.06	98.63
T709	44	94BCW319	till	0.5-0.84	green	HiCr-diopsid	55.42	0.10	1.76	3.60	2.30	0.09	16.38	17.99	2.22	0.10	99.96
T709	45	94BCW319	till	0.5-0.84	green	Cr-diopside	54.36	0.16	1.61	1.46	2.55	0.04	17.31	20.44	1.40	0.05	99.37
T709	46	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.12	0.28	1.18	2.73	2.30	0.15	17.25	19.33	1.77	0.08	99.19
T709	47	94BCW319	till	0.5-0.84	green	Cr-diopside	53.80	0.08	1.28	1.36	2.72	0.10	18.44	20.26	1.10	0.07	99.20
T709	48	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.51	0.22	1.46	2.45	2.51	0.11	17.25	19.96	1.84	0.09	99.39
T709	49	94BCW319	till	0.5-0.84	green	Cr-diopside	53.07	0.06	1.44	1.29	2.51	0.08	17.70	20.43	1.13	0.07	97.76
T709	50	94BCW319	till	0.5-0.84	green	Cr-diopside	54.72	0.16	1.59	1.42	2.62	0.10	17.25	20.33	1.36	0.02	99.57
T709	51	94BCW319	till	0.5-0.84	green	Cr-diopside	53.68	0.17	1.29	0.84	2.92	0.11	17.52	21.42	1.04	0.04	99.03
T709	52	94BCW319	till	0.5-0.84	green	*missed grain*	27.05	0.08	0.69	1.27	2.22	0.08	6.92	17.30	0.42	0.05	56.08
T709	53	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.50	0.30	1.87	2.04	2.56	0.12	16.55	19.18	1.87	0.04	99.03
T709	54	94BCW319	till	0.5-0.84	green	Cr-diopside	53.75	0.19	1.60	1.25	2.53	0.13	17.38	20.44	1.31	0.06	98.65
T709	55	94BCW319	till	0.5-0.84	green	Cr-diopside	54.03	0.25	1.28	1.17	2.43	0.10	17.43	21.35	1.04	0.03	99.12
T709	56	94BCW319	till	0.5-0.84	green	Cr-diopside	54.84	0.22	1.36	1.41	2.63	0.10	16.91	20.28	1.45	0.02	99.22
T709	57	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.88	0.17	0.92	1.50	2.44	0.07	17.18	21.39	1.12	0.05	98.71
T709	58	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.72	0.26	1.52	2.42	2.50	0.12	16.59	19.06	1.83	0.04	98.06
T709	59	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.21	0.27	1.53	2.26	2.58	0.12	16.80	19.35	1.83	0.03	97.97
T709	60	94BCW319	till	0.5-0.84	green	Cr-diopside	53.65	0.16	1.59	1.29	2.62	0.13	17.15	20.13	1.31	0.05	98.06
T709	61	94BCW319	till	0.5-0.84	pl green	diopside	53.81	0.26	1.79	0.48	2.81	0.11	16.91	20.63	1.36	0.03	98.19
T709	62	94BCW319	till	0.5-0.84	pl green	enstatite	56.93	0.01	0.47	0.35	4.66	0.13	35.97	0.35	0.13	0.00	98.99
T709	63	94BCW319	till	0.5-0.84	pl green	enstatite	55.97	0.00	1.71	0.55	4.31	0.11	35.72	0.45	0.02	0.01	98.83
T709	64	94BCW319	till	0.5-0.84	pl green	enstatite	57.88	0.00	0.55	0.34	4.56	0.12	36.67	0.27	0.04	0.00	100.43
T709	65	94BCW319	till	0.5-0.84	pl green	enstatite	58.02	0.05	0.13	0.30	4.29	0.14	36.76	0.36	0.09	0.01	100.16
T709	66	94BCW319	till	0.5-0.84	pl green	enstatite	57.00	0.05	0.59	0.31	5.22	0.17	35.36	0.73	0.11	0.00	99.55
T709	67	94BCW319	till	0.5-0.84	black	Ti-chromite	0.23	3.96	3.77	53.74	25.77	0.36	10.18	0.00	0.00	0.00	98.01
T709	68	94BCW319	till	0.5-0.84	black	Ti-chromite	0.21	4.21	4.03	51.51	27.88	0.44	9.60	0.01	0.00	0.00	97.89
T709	69	94BCW319	till	0.5-0.84	black	Ti-chromite	0.19	4.32	3.50	51.29	29.21	0.37	9.39	0.00	0.01	0.00	98.28
T670	86	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.12	0.02	18.36	7.63	7.02	0.34	18.73	7.46	0.00	0.02	100.70
T670	87	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.49	0.01	16.76	9.23	6.82	0.44	19.36	6.44	0.00	0.03	99.58
T670	88	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.11	0.18	17.53	7.93	7.26	0.39	19.74	5.95	0.03	0.01	100.12
T670	89	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.08	0.02	18.23	7.42	6.84	0.38	20.66	4.94	0.00	0.02	99.56
T670	90	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.74	0.09	18.24	7.38	8.11	0.53	19.04	6.39	0.00	0.01	100.53
T670	91	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.84	0.02	17.46	8.70	6.80	0.35	19.14	6.89	0.00	0.00	100.19
T670	92	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.65	0.00	19.37	6.45	7.01	0.44	21.80	3.85	0.01	0.01	100.60
T670	93	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.77	0.01	19.05	6.69	7.23	0.47	22.33	2.76	0.00	0.00	100.30
T670	94	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.10	0.14	19.34	5.74	7.68	0.55	19.04	6.45	0.01	0.01	100.05
T670	95	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.77	0.03	17.26	8.69	7.24	0.45	19.31	6.17	0.00	0.02	99.93
T670	96	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.83	0.12	16.79	9.32	7.08	0.40	19.41	6.55	0.01	0.00	100.51
T670	97	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.17	0.02	18.38	7.64	7.39	0.50	19.07	6.57	0.00	0.00	100.74

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	98	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.31	0.05	18.14	7.75	7.20	0.50	20.50	4.95	0.00	0.01	100.40
T670	99	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.33	0.00	17.47	8.51	6.72	0.43	21.87	3.85	0.02	0.00	100.20
T670	100	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.57	0.07	18.06	7.83	6.96	0.43	19.96	5.98	0.00	0.02	100.87
T670	101	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.59	0.02	19.99	5.69	7.59	0.43	20.91	4.74	0.00	0.00	100.95
T670	102	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.77	0.01	17.07	8.56	7.44	0.40	19.00	6.54	0.00	0.00	99.79
T670	103	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.76	0.03	16.71	9.41	6.90	0.44	19.31	6.97	0.01	0.00	100.53
T670	104	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.87	0.06	17.70	7.80	7.51	0.51	19.05	6.08	0.00	0.01	99.59
T670	105	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.35	0.19	18.22	7.23	6.89	0.41	20.77	5.43	0.04	0.01	100.53
T670	106	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.03	0.21	18.37	6.81	7.12	0.43	20.42	5.45	0.01	0.00	99.85
T670	107	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.22	0.16	18.06	7.89	7.03	0.38	20.21	5.75	0.02	0.01	100.73
T670	108	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.98	0.28	17.28	7.89	7.63	0.38	19.32	6.44	0.00	0.02	100.20
T670	109	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.82	0.10	19.81	4.64	7.05	0.32	21.23	5.32	0.02	0.00	100.29
T670	110	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.98	0.39	18.43	6.37	7.00	0.38	20.80	5.22	0.05	0.00	99.62
T670	111	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.94	0.46	17.57	7.51	6.48	0.37	20.21	6.02	0.06	0.00	99.63
T670	112	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.72	0.29	17.89	7.28	6.93	0.43	20.36	5.78	0.02	0.00	99.70
T670	113	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.73	0.05	18.21	7.47	7.84	0.53	18.23	7.02	0.00	0.01	100.08
T670	114	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.65	0.49	13.76	11.90	7.13	0.32	18.14	7.69	0.01	0.00	99.08
T670	115	94BCW319	till	0.25-0.5	purple	Cr-pyrope	38.69	1.11	13.45	10.27	8.26	0.45	14.38	11.64	0.03	0.02	98.30
T670	116	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.33	0.08	19.28	5.15	7.30	0.33	20.61	5.67	0.02	0.01	99.78
T670	117	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.31	0.37	19.39	4.57	8.35	0.40	18.97	6.67	0.02	0.00	100.06
T670	118	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.21	0.30	18.17	6.69	7.65	0.41	19.23	6.42	0.03	0.03	100.13
T670	119	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.69	0.22	20.77	3.78	8.04	0.46	20.93	4.55	0.04	0.02	100.49
T670	120	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.18	0.63	18.06	6.26	7.39	0.40	19.85	5.61	0.04	0.00	99.43
T670	121	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.25	0.25	18.95	5.47	7.79	0.42	19.75	6.22	0.00	0.01	100.10
T670	122	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.23	0.34	19.46	4.90	8.24	0.47	18.47	7.05	0.00	0.01	100.17
T670	123	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.20	0.22	18.61	6.56	7.40	0.38	20.41	5.55	0.03	0.00	100.36
T670	124	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.50	0.24	19.19	6.09	7.07	0.34	20.46	5.31	0.03	0.03	100.25
T670	125	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.51	0.32	19.46	5.69	7.17	0.36	20.70	5.29	0.05	0.01	100.55
T670	126	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.66	0.30	19.11	5.18	7.35	0.33	20.89	5.40	0.01	0.00	100.23
T670	127	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.65	0.02	20.01	5.64	7.63	0.46	21.71	3.06	0.00	0.03	100.19
T670	128	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.55	0.36	17.74	7.50	7.01	0.38	20.09	6.15	0.00	0.00	100.79
T670	129	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.21	0.43	18.29	6.18	7.73	0.39	19.98	6.04	0.03	0.02	100.29
T670	130	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.40	0.20	19.00	4.60	11.59	0.61	16.94	6.52	0.00	0.01	99.84
T670	131	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.90	0.40	18.76	5.73	7.84	0.35	19.41	6.43	0.00	0.00	99.79
T670	132	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.35	0.59	19.35	4.41	7.47	0.33	21.02	5.20	0.03	0.00	99.74
T670	133	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.18	0.43	17.59	7.19	7.06	0.41	20.07	6.13	0.02	0.00	100.09
T670	134	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.19	0.30	19.02	5.55	7.39	0.38	20.43	5.00	0.00	0.03	99.28
T670	135	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.00	0.40	19.07	5.61	6.50	0.32	21.87	5.12	0.06	0.01	99.96
T670	136	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.59	0.27	19.66	4.93	7.10	0.35	21.34	5.19	0.00	0.01	100.46
T670	137	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.07	0.51	19.49	4.03	8.18	0.32	20.65	5.05	0.03	0.02	99.35
T670	138	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.74	0.59	17.72	6.55	7.99	0.31	19.34	5.98	0.00	0.00	100.22
T670	139	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.34	0.33	19.91	4.45	7.55	0.35	20.65	5.05	0.03	0.00	99.67
T670	140	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.35	0.34	18.77	5.37	7.36	0.35	20.53	5.21	0.04	0.01	98.34
T670	141	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.84	0.37	17.40	7.07	7.33	0.37	19.72	6.02	0.02	0.01	99.14
T670	142	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.25	0.60	15.72	9.03	7.67	0.41	19.17	6.66	0.03	0.02	99.56
T670	143	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.98	0.43	19.38	4.81	8.36	0.41	18.54	6.91	0.03	0.03	99.87
T670	144	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.26	0.42	16.74	8.32	6.88	0.35	19.81	6.33	0.04	0.01	99.16
T670	145	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.75	0.32	19.29	4.60	7.76	0.37	20.23	5.79	0.04	0.02	99.17
T670	146	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.49	0.25	19.26	5.61	7.81	0.42	20.14	5.19	0.06	0.00	100.22
T670	147	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.16	0.46	20.29	3.73	8.31	0.40	20.54	4.75	0.05	0.00	99.69
T670	148	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.52	0.43	20.09	4.22	7.60	0.37	20.85	5.02	0.04	0.00	100.13
T670	149	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.15	0.36	19.70	4.26	7.67	0.36	20.45	5.13	0.00	0.01	99.08

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T670	150	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.00	0.19	21.10	3.09	7.65	0.33	21.09	4.71	0.03	0.00	100.19
T670	151	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.39	0.03	19.87	5.60	7.74	0.53	19.64	5.45	0.00	0.00	100.25
T670	152	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.20	0.39	18.93	5.49	8.23	0.40	18.98	6.74	0.01	0.02	100.38
T670	153	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.80	0.26	21.27	2.88	9.63	0.42	19.77	4.51	0.04	0.02	100.60
T670	154	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.10	0.25	21.58	2.76	7.41	0.30	21.39	4.70	0.02	0.01	100.51
T670	155	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.61	0.36	20.60	3.71	7.56	0.32	20.98	5.11	0.03	0.02	100.29
T671	1	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.09	0.43	19.31	5.47	7.25	0.33	21.17	5.72	0.00	0.00	100.77
T671	2	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.63	0.04	16.76	9.41	6.99	0.45	19.59	6.50	0.00	0.01	100.36
T671	3	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.91	0.35	20.62	3.81	7.23	0.35	21.75	4.86	0.03	0.00	100.90
T671	4	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.36	0.26	19.41	5.93	7.63	0.43	20.81	5.17	0.02	0.02	101.04
T671	5	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.78	0.47	18.33	6.60	8.15	0.42	18.90	7.05	0.00	0.00	100.69
T671	6	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.59	0.38	19.36	4.87	8.64	0.48	18.99	6.75	0.00	0.00	100.05
T671	7	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.99	0.29	19.76	5.17	7.38	0.40	20.92	5.17	0.02	0.00	100.11
T671	8	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.47	0.34	17.54	7.87	7.16	0.40	20.00	6.02	0.02	0.01	99.82
T671	9	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.40	0.26	20.04	4.42	7.77	0.42	20.80	5.26	0.02	0.03	100.42
T671	10	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.08	0.35	20.34	4.17	7.85	0.37	20.49	5.36	0.04	0.00	100.05
T671	11	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.90	0.29	19.74	4.64	7.80	0.42	20.34	5.58	0.02	0.02	99.74
T671	12	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.34	0.49	18.88	5.39	7.97	0.45	18.84	6.83	0.03	0.01	99.23
T671	13	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.97	0.18	21.03	3.14	7.49	0.46	21.13	4.48	0.01	0.00	98.88
T671	14	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.48	0.36	16.96	7.80	7.52	0.47	19.68	5.69	0.06	0.00	98.02
T671	15	94BCW319	till	0.25-0.5	purple	Cr-pyrope	39.65	0.03	16.19	10.00	7.08	0.46	19.30	6.04	0.02	0.00	98.78
T671	16	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.10	0.38	19.08	4.90	8.25	0.43	18.86	6.63	0.03	0.01	98.67
T671	17	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.55	0.67	19.05	5.10	8.88	0.52	19.86	5.35	0.00	0.01	99.98
T671	18	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.73	0.28	19.45	4.94	7.50	0.36	21.20	5.41	0.03	0.00	99.91
T671	19	94BCW319	till	0.25-0.5	purple	Cr-pyrope	37.43	0.31	16.35	7.54	12.08	0.52	15.94	6.63	0.02	0.03	96.85
T671	20	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.30	0.36	19.46	4.70	8.45	0.48	18.74	6.96	0.01	0.02	99.48
T671	21	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.80	0.46	18.42	6.31	8.21	0.40	19.01	7.06	0.03	0.00	100.69
T671	22	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.46	0.31	18.53	6.40	7.33	0.50	20.69	5.42	0.07	0.01	99.73
T671	23	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.58	0.38	19.46	4.78	8.64	0.48	18.76	6.98	0.00	0.01	100.05
T671	24	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.59	0.46	16.62	9.09	6.88	0.34	20.08	6.29	0.07	0.01	100.42
T671	25	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.90	0.01	18.43	7.45	7.70	0.47	19.72	5.96	0.00	0.00	100.65
T671	26	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.65	0.34	17.87	7.73	7.13	0.33	20.14	6.08	0.00	0.00	100.28
T671	27	94BCW319	till	0.25-0.5	orange	almandine	37.49	0.18	21.26	0.04	27.03	3.35	2.00	9.60	0.03	0.01	100.98
T671	28	94BCW319	till	0.25-0.5	orange	almandine	37.68	0.07	21.57	0.02	26.04	1.57	2.15	12.15	0.00	0.00	101.25
T671	29	94BCW319	till	0.25-0.5	orange	almandine	37.43	0.08	21.33	0.03	27.08	1.53	2.27	10.62	0.01	0.00	100.37
T671	30	94BCW319	till	0.25-0.5	pl green	olivine	40.10	0.04	0.00	0.02	8.54	0.14	50.65	0.04	0.00	0.03	99.57
T671	31	94BCW319	till	0.25-0.5	pl green	olivine	39.89	0.03	0.03	0.03	9.28	0.10	50.14	0.03	0.00	0.00	99.52
T671	32	94BCW319	till	0.25-0.5	pl green	olivine	39.83	0.02	0.03	0.04	8.99	0.09	49.81	0.05	0.00	0.01	98.86
T671	33	94BCW319	till	0.25-0.5	pl green	olivine	39.68	0.07	0.00	0.01	9.33	0.17	50.13	0.04	0.00	0.02	99.44
T671	34	94BCW319	till	0.25-0.5	black	ilmenite	0.00	47.26	0.04	0.01	47.57	3.81	0.08	0.01	0.05	0.01	98.83
T671	35	94BCW319	till	0.25-0.5	black	ilmenite	0.00	46.48	0.05	0.03	49.21	1.27	1.03	0.01	0.00	0.02	98.09
T671	36	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.18	0.08	0.00	47.79	0.55	0.23	0.00	0.00	0.01	98.84
T671	37	94BCW319	till	0.25-0.5	black	chromite	0.06	0.00	15.85	55.35	15.40	0.25	12.72	0.03	0.02	0.00	99.69
T671	38	94BCW319	till	0.25-0.5	black	ilmenite	0.00	51.98	0.00	0.00	43.78	3.43	0.03	0.04	0.00	0.00	99.26
T671	39	94BCW319	till	0.25-0.5	black	chromite	0.18	3.41	1.84	54.75	27.56	0.46	8.80	0.03	0.15	0.03	97.19
T671	40	94BCW319	till	0.25-0.5	black	ilmenite	0.00	47.75	0.07	0.00	48.01	2.46	0.16	0.01	0.00	0.00	98.46
T671	41	94BCW319	till	0.25-0.5	black	ilmenite	0.00	48.93	0.09	0.02	48.97	1.26	0.08	0.01	0.00	0.00	99.35
T671	42	94BCW319	till	0.25-0.5	grey	hematite	0.46	0.25	0.15	0.00	88.31	0.09	0.00	0.00	0.07	0.01	89.33
T671	43	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.30	0.06	0.00	47.46	0.92	0.42	0.00	0.00	0.00	99.15
T671	44	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.53	0.08	0.03	48.16	0.53	0.34	0.02	0.00	0.00	99.69
T671	45	94BCW319	till	0.25-0.5	grey	hematite	2.29	0.06	1.20	0.13	85.75	0.01	0.61	0.04	0.00	0.03	90.12
T671	46	94BCW319	till	0.25-0.5	black	ilmenite	0.00	48.63	0.03	0.02	48.87	1.29	0.07	0.03	0.00	0.00	98.94

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T671	47	94BCW319	till	0.25-0.5	black	ilmenite	0.07	48.90	0.05	0.01	47.75	2.10	0.49	0.01	0.01	0.01	99.39
T671	48	94BCW319	till	0.25-0.5	black	chromite	0.14	1.45	1.33	62.22	23.98	0.48	9.61	0.00	0.02	0.03	99.26
T671	49	94BCW319	till	0.25-0.5	black	Mg-ilmenite	0.00	54.76	0.33	1.62	28.03	0.29	14.22	0.05	0.00	0.01	99.31
T671	50	94BCW319	till	0.25-0.5	black	chromite	0.07	3.00	2.10	55.40	28.33	0.52	9.32	0.02	0.00	0.00	98.76
T671	51	94BCW319	till	0.25-0.5	black	chromite*	0.12	0.03	8.33	62.05	17.06	0.27	12.12	0.01	0.00	0.00	100.00
T671	52	94BCW319	till	0.25-0.5	black(kely)	Cr-pyrope	40.30	0.24	17.50	7.77	7.60	0.48	19.79	5.95	0.04	0.00	99.67
T671	53	94BCW319	till	0.25-0.5	black	ilmenite	0.14	50.41	0.02	0.17	47.72	1.05	0.20	0.02	0.01	0.01	99.74
T671	54	94BCW319	till	0.25-0.5	black	ilmenite	0.09	47.86	0.10	0.00	49.80	0.59	0.75	0.02	0.00	0.00	99.20
T671	55	94BCW319	till	0.25-0.5	black	ilmenite	0.01	43.45	0.10	0.00	52.61	0.76	0.74	0.00	0.01	0.01	97.70
T671	56	94BCW319	till	0.25-0.5	black	hedenbergite	48.96	0.10	1.23	0.00	32.80	0.87	15.15	0.55	0.01	0.02	99.68
T671	57	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.88	0.01	0.00	46.63	1.48	0.13	0.03	0.00	0.00	99.16
T671	58	94BCW319	till	0.25-0.5	black	ilmenite	0.02	48.78	0.04	0.16	49.42	0.68	0.38	0.01	0.00	0.01	99.48
T671	59	94BCW319	till	0.25-0.5	black	ilmenite	0.00	47.11	0.07	0.04	50.00	0.68	1.03	0.01	0.02	0.02	98.98
T671	60	94BCW319	till	0.25-0.5	black	ilmenite	0.00	46.48	0.02	0.00	49.65	1.55	0.74	0.00	0.00	0.01	98.45
T671	61	94BCW319	till	0.25-0.5	black	ilmenite	0.00	50.34	0.04	0.02	47.98	1.01	0.06	0.00	0.00	0.03	99.47
T671	62	94BCW319	till	0.25-0.5	black	ilmenite	0.00	52.88	0.06	0.05	40.42	0.22	0.02	0.08	0.00	0.02	93.73
T671	63	94BCW319	till	0.25-0.5	black	ilmenite	0.00	52.45	0.04	0.02	47.11	0.32	0.57	0.02	0.01	0.02	100.54
T671	64	94BCW319	till	0.25-0.5	black	ilmenite	0.00	40.94	0.06	0.01	55.54	1.85	0.05	0.02	0.03	0.00	98.49
T671	65	94BCW319	till	0.25-0.5	black	Cr-spinel	0.15	0.06	53.61	12.35	12.10	0.11	18.67	0.02	0.01	0.00	97.07
T671	66	94BCW319	till	0.25-0.5	black	ilmenite	0.00	47.15	0.05	0.04	49.79	0.46	1.00	0.02	0.00	0.00	98.51
T671	67	94BCW319	till	0.25-0.5	green	diopside	53.68	0.25	2.08	0.24	3.64	0.07	17.20	20.58	1.43	0.02	99.19
T671	68	94BCW319	till	0.25-0.5	green	Cr-diopside	53.78	0.15	1.60	1.20	2.68	0.13	17.85	20.81	1.25	0.04	99.47
T671	69	94BCW319	till	0.25-0.5	green	Cr-diopside	53.23	0.14	1.61	1.29	2.53	0.07	17.72	20.82	1.31	0.05	98.77
T671	70	94BCW319	till	0.25-0.5	green	Cr-diopside	53.51	0.23	1.67	1.29	2.59	0.11	17.78	20.86	1.33	0.06	99.42
T671	71	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.29	0.18	1.60	3.15	2.38	0.10	16.31	19.42	2.14	0.03	98.59
T671	72	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.28	0.24	1.24	1.95	2.29	0.13	17.06	21.13	1.51	0.05	98.88
T671	73	94BCW319	till	0.25-0.5	green	Cr-diopside	53.62	0.11	1.36	1.19	2.42	0.08	17.71	21.50	1.08	0.06	99.13
T671	74	94BCW319	till	0.25-0.5	green	Cr-diopside	53.73	0.13	1.40	1.32	2.70	0.09	17.63	21.19	1.11	0.05	99.33
T671	75	94BCW319	till	0.25-0.5	green	Cr-diopside	53.72	0.23	1.18	1.48	2.38	0.07	17.11	21.78	1.32	0.04	99.31
T671	76	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.87	0.23	1.38	1.54	2.43	0.08	17.61	21.18	1.23	0.05	99.60
T671	77	94BCW319	till	0.25-0.5	green	diopside	54.05	0.26	1.88	0.45	2.87	0.09	17.82	20.56	1.42	0.03	99.43
T671	78	94BCW319	till	0.25-0.5	green	Cr-diopside	54.12	0.27	1.77	0.62	2.64	0.15	17.65	20.99	1.35	0.02	99.58
T671	79	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.48	0.10	1.95	3.06	2.27	0.08	16.79	19.12	2.13	0.04	99.02
T671	80	94BCW319	till	0.25-0.5	green	Cr-diopside	53.83	0.16	2.47	1.34	2.47	0.08	17.17	19.36	1.98	0.02	98.88
T671	81	94BCW319	till	0.25-0.5	green	Cr-diopside	53.59	0.19	1.64	1.29	2.56	0.12	17.45	20.85	1.36	0.02	99.07
T671	82	94BCW319	till	0.25-0.5	green	Cr-diopside	53.70	0.13	1.58	1.39	2.53	0.16	18.29	20.12	1.38	0.05	99.32
T671	83	94BCW319	till	0.25-0.5	green	Cr-diopside	53.59	0.18	1.72	1.35	2.53	0.07	17.62	20.79	1.35	0.07	99.26
T671	84	94BCW319	till	0.25-0.5	green	Cr-diopside	53.36	0.20	1.17	1.48	2.43	0.12	17.22	21.78	1.15	0.02	98.93
T671	85	94BCW319	till	0.25-0.5	green	Cr-diopside	53.77	0.22	1.67	1.38	2.59	0.13	17.82	21.01	1.30	0.05	99.94
T671	86	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.37	0.26	1.52	2.42	2.10	0.10	17.18	20.67	1.61	0.06	99.29
T671	87	94BCW319	till	0.25-0.5	green	Cr-diopside	53.64	0.19	1.53	1.08	2.81	0.12	17.99	21.00	1.11	0.05	99.52
T671	88	94BCW319	till	0.25-0.5	green	Cr-diopside	53.50	0.09	0.30	1.31	1.70	0.10	17.61	23.75	0.75	0.02	99.13
T671	89	94BCW319	till	0.25-0.5	green	Cr-diopside	53.32	0.17	0.80	0.75	2.43	0.12	17.51	23.32	0.77	0.01	99.20
T671	90	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.19	0.14	0.44	2.23	1.75	0.10	17.04	22.97	1.11	0.03	99.00
T671	91	94BCW319	till	0.25-0.5	green	Cr-diopside	53.30	0.12	1.32	1.11	2.53	0.09	17.90	21.42	1.01	0.05	98.85
T671	92	94BCW319	till	0.25-0.5	green	Cr-diopside	52.68	0.19	1.45	1.16	2.52	0.09	17.57	21.70	1.14	0.03	98.54
T671	93	94BCW319	till	0.25-0.5	green	Cr-diopside	53.10	0.18	1.64	1.23	2.52	0.12	17.66	20.76	1.29	0.07	98.56
T671	94	94BCW319	till	0.25-0.5	green	Cr-diopside	53.38	0.20	0.91	1.26	2.38	0.03	17.59	22.26	1.01	0.04	99.06
T671	95	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.36	0.28	1.82	2.27	2.52	0.09	16.69	19.67	1.98	0.01	98.69
T671	96	94BCW319	till	0.25-0.5	green	diopside	51.91	0.02	1.69	0.21	6.50	0.17	16.88	20.96	0.33	0.01	98.67
T671	97	94BCW319	till	0.25-0.5	green	Cr-diopside	53.47	0.10	1.31	1.04	2.64	0.09	18.47	21.03	0.99	0.06	99.20
T671	98	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.79	0.25	1.41	2.17	2.36	0.11	16.97	20.44	1.69	0.05	99.24

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Mount	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T671	99	94BCW319	till	0.25-0.5	green	Cr-diopside	53.46	0.21	1.68	1.18	2.50	0.07	17.41	20.88	1.36	0.04	98.76
T671	100	94BCW319	till	0.25-0.5	green	Cr-diopside	53.38	0.08	1.30	1.07	2.66	0.13	18.19	21.08	1.00	0.05	98.93
T671	101	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.71	0.09	2.07	2.30	2.33	0.12	17.18	19.25	2.10	0.03	99.19
T671	102	94BCW319	till	0.25-0.5	green	Cr-diopside	53.80	0.10	1.33	1.06	2.62	0.10	18.31	21.24	1.04	0.05	99.64
T671	103	94BCW319	till	0.25-0.5	green	Cr-diopside	53.55	0.14	0.80	1.07	2.62	0.05	17.65	22.86	0.93	0.04	99.70
T671	104	94BCW319	till	0.25-0.5	green	Cr-diopside	53.51	0.14	1.59	1.35	2.52	0.10	18.14	20.45	1.34	0.03	99.16
T671	105	94BCW319	till	0.25-0.5	green	Cr-diopside	53.13	0.13	1.59	1.12	2.55	0.12	17.72	21.41	1.15	0.05	98.95
T671	106	94BCW319	till	0.25-0.5	green	Cr-diopside	53.78	0.13	1.33	1.16	2.64	0.12	18.35	21.11	1.02	0.05	99.69
T671	107	94BCW319	till	0.25-0.5	green	Cr-diopside	53.36	0.16	1.41	1.17	2.90	0.06	18.21	20.53	1.02	0.06	98.88
T671	108	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.75	0.28	2.48	2.46	2.58	0.11	16.30	18.42	2.45	0.01	98.84
T671	109	94BCW319	till	0.25-0.5	green	Cr-diopside	53.15	0.14	1.24	0.86	2.83	0.07	17.72	21.24	1.00	0.03	98.28
T671	110	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.19	0.08	0.55	2.30	2.20	0.01	16.89	21.74	1.44	0.02	98.41
T671	111	94BCW319	till	0.25-0.5	green	HiCr-diopsid	53.63	0.20	1.21	1.63	2.45	0.10	17.42	21.73	1.21	0.04	99.60
T709	70	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.66	0.00	17.54	7.91	7.90	0.51	18.75	6.43	0.00	0.00	99.69
T709	71	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.96	0.03	18.74	6.36	7.16	0.44	19.99	5.85	0.00	0.00	99.52
T709	72	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.04	0.22	19.03	5.23	7.48	0.39	20.75	5.10	0.00	0.00	100.23
T709	73	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.20	0.21	17.28	7.63	7.12	0.41	20.84	5.38	0.01	0.00	100.08
T709	74	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.54	0.29	15.58	9.91	6.67	0.40	19.88	6.39	0.01	0.02	99.70
T709	75	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.81	0.39	16.97	7.95	7.07	0.36	20.18	5.64	0.05	0.01	99.41
T709	76	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.13	0.52	16.68	7.92	7.10	0.39	19.77	6.19	0.07	0.01	98.77
T709	77	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.17	0.03	19.69	4.66	7.94	0.43	20.79	4.68	0.00	0.02	100.40
T709	78	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.52	0.22	19.98	3.79	7.51	0.36	21.46	4.54	0.05	0.01	99.43
T709	79	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.30	0.43	18.11	6.24	7.22	0.38	20.56	5.39	0.00	0.00	99.62
T709	80	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.42	0.29	19.49	4.39	7.63	0.42	20.52	5.02	0.00	0.00	99.18
T709	81	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.03	0.36	19.89	3.53	7.52	0.39	21.14	4.84	0.03	0.00	98.71
T709	82	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.19	0.00	17.27	8.19	7.21	0.45	18.73	7.37	0.00	0.01	99.41
T709	83	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.04	0.32	19.04	4.62	8.68	0.47	18.54	7.12	0.02	0.00	98.84
T709	84	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.83	0.32	18.59	5.03	8.65	0.42	18.62	6.80	0.01	0.00	99.27
T709	85	94BCW319	till	0.5-0.84	purple	Cr-pyrope	39.79	0.03	17.41	7.71	7.95	0.59	18.36	6.48	0.02	0.02	98.37
T709	86	94BCW319	till	0.5-0.84	rd-ong	Cr-pyrope	42.04	0.29	21.21	2.12	9.03	0.37	20.92	4.14	0.04	0.02	100.17
T709	87	94BCW319	till	0.5-0.84	orange	almandine	37.73	0.08	21.40	0.03	26.48	1.72	10.18	1.11	0.00	0.00	98.72
T709	88	94BCW319	till	0.5-0.84	orange	almandine	36.38	0.10	20.26	0.05	35.23	1.19	1.49	4.53	0.00	0.00	99.22
T709	89	94BCW319	till	0.5-0.84	pl green	enstatite	57.30	0.05	0.48	0.38	4.40	0.11	36.15	0.37	0.07	0.00	99.30
T709	90	94BCW319	till	0.5-0.84	pl green	enstatite	57.08	0.00	1.49	0.51	4.45	0.17	35.96	0.38	0.00	0.01	100.04
T709	91	94BCW319	till	0.5-0.84	pl green	enstatite	57.55	0.11	0.23	0.36	4.23	0.16	36.21	0.39	0.12	0.00	99.36
T709	92	94BCW319	till	0.5-0.84	pl green	olivine	40.74	0.08	0.03	0.09	8.40	0.12	50.23	0.05	0.00	0.01	99.75
T709	93	94BCW319	till	0.5-0.84	pl green	olivine	40.11	0.04	0.04	0.07	8.63	0.09	50.16	0.09	0.00	0.00	99.23
T709	94	94BCW319	till	0.5-0.84	pl green	olivine	40.75	0.04	0.03	0.03	8.94	0.15	49.47	0.04	0.00	0.00	99.44
T709	95	94BCW319	till	0.5-0.84	black	vesuvianite	38.58	0.31	7.59	0.06	6.03	0.34	8.91	33.50	0.38	0.62	96.33
T709	96	94BCW319	till	0.5-0.84	green	Cr-diopside	53.52	0.10	1.63	1.34	2.67	0.09	17.33	20.46	1.41	0.03	98.58
T709	97	94BCW319	till	0.5-0.84	green	Cr-diopside	54.76	0.12	1.63	1.27	2.54	0.15	17.56	20.60	1.34	0.05	100.01
T709	98	94BCW319	till	0.5-0.84	green	HiCr-diopsid	52.59	0.19	1.46	3.07	2.25	0.13	16.13	19.64	1.87	0.03	97.36
T709	99	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.48	0.30	1.29	1.63	2.44	0.15	16.95	20.95	1.48	0.03	99.69
T709	100	94BCW319	till	0.5-0.84	green	Cr-diopside	54.38	0.21	1.58	1.35	2.53	0.07	17.56	20.26	1.36	0.03	99.31
T709	101	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.47	0.28	1.66	2.02	2.79	0.09	16.44	19.46	1.85	0.04	99.10
T709	102	94BCW319	till	0.5-0.84	green	Cr-diopside	53.48	0.19	1.65	1.29	2.58	0.13	18.25	19.47	1.40	0.06	98.51
T709	103	94BCW319	till	0.5-0.84	green	Cr-diopside	52.64	0.20	1.62	1.24	2.69	0.15	17.54	19.73	1.34	0.06	97.22
T709	104	94BCW319	till	0.5-0.84	green	Cr-diopside	54.28	0.32	1.35	0.89	2.80	0.11	17.95	20.55	1.09	0.07	99.40
T709	105	94BCW319	till	0.5-0.84	green	HiCr-diopsid	52.33	0.13	1.59	2.14	2.40	0.14	16.90	20.00	1.52	0.06	97.21
T709	106	94BCW319	till	0.5-0.84	green	Cr-diopside	54.12	0.29	1.21	1.08	2.44	0.11	17.60	21.19	1.03	0.05	99.10
T709	107	94BCW319	till	0.5-0.84	green	Cr-diopside	54.13	0.11	1.32	1.07	2.66	0.07	17.98	20.80	1.02	0.05	99.20
T709	108	94BCW319	till	0.5-0.84	green	Cr-diopside	53.47	0.08	1.21	1.07	2.71	0.08	18.16	20.29	0.98	0.05	98.11

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T709	109	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.20	0.00	2.28	2.13	1.77	0.06	16.18	20.15	2.13	0.02	98.91
T709	110	94BCW319	till	0.5-0.84	green	Cr-diopside	53.91	0.09	1.35	1.11	2.72	0.10	17.74	20.63	1.06	0.05	98.77
T709	111	94BCW319	till	0.5-0.84	green	Cr-diopside	53.23	0.08	1.29	1.12	2.74	0.14	18.09	19.95	0.99	0.08	97.72
T709	112	94BCW319	till	0.5-0.84	green	Cr-diopside	54.55	0.17	1.58	1.28	2.64	0.09	18.07	20.32	1.29	0.07	100.05
T709	113	94BCW319	till	0.5-0.84	green	Cr-diopside	53.93	0.24	1.30	0.58	2.66	0.08	17.50	21.79	1.09	0.03	99.19
T709	114	94BCW319	till	0.5-0.84	green	Cr-diopside	54.96	0.19	1.38	0.96	2.75	0.12	18.28	20.50	1.13	0.05	100.31
T709	115	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.13	0.09	1.76	2.86	2.20	0.12	17.04	18.61	2.05	0.04	97.91
T709	116	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.43	0.22	1.23	1.51	2.47	0.11	17.26	21.11	1.23	0.03	99.61
T709	117	94BCW319	till	0.5-0.84	green	Cr-diopside	53.39	0.16	1.60	0.71	2.56	0.10	17.42	21.02	1.27	0.03	98.27
T709	118	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.30	0.31	1.67	1.51	2.82	0.09	17.26	19.90	1.63	0.04	98.53
T709	119	94BCW319	till	0.5-0.84	green	Cr-diopside	53.64	0.27	1.58	0.80	3.08	0.09	17.29	20.65	1.15	0.11	98.66
T709	120	94BCW319	till	0.5-0.84	green	Cr-diopside	53.97	0.11	1.57	1.26	2.56	0.10	17.69	20.34	1.31	0.05	98.96
T709	121	94BCW319	till	0.5-0.84	green	Cr-diopside	52.90	0.22	1.74	0.62	2.99	0.12	17.28	19.84	1.43	0.03	97.17
T709	122	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.66	0.15	1.89	2.53	2.55	0.12	16.75	18.46	2.02	0.07	98.19
T709	123	94BCW319	till	0.5-0.84	green	Cr-diopside	53.54	0.20	1.66	1.39	2.36	0.06	16.96	20.94	1.40	0.04	98.55
T709	124	94BCW319	till	0.5-0.84	green	Cr-diopside	53.79	0.08	1.68	1.36	2.59	0.08	17.33	20.68	1.35	0.04	98.98
T709	125	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.74	0.15	0.87	2.36	1.94	0.08	16.98	21.04	1.37	0.02	98.55
T709	126	94BCW319	till	0.5-0.84	green	Cr-diopside	53.51	0.13	0.35	1.21	1.72	0.08	17.43	23.11	0.74	0.02	98.31
T709	127	94BCW319	till	0.5-0.84	green	Cr-diopside	53.97	0.14	1.65	1.38	2.44	0.10	17.11	20.35	1.33	0.04	98.51
T709	128	94BCW319	till	0.5-0.84	green	Cr-diopside	52.16	0.27	1.56	1.43	2.78	0.13	17.11	19.82	1.77	0.12	97.15
T709	129	94BCW319	till	0.5-0.84	green	Cr-diopside	53.66	0.14	1.57	1.34	2.75	0.08	17.42	20.10	1.33	0.07	98.46
T709	130	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.10	0.11	1.40	1.77	2.47	0.14	18.24	19.39	1.29	0.07	97.96
T709	131	94BCW319	till	0.5-0.84	green	Cr-diopside	53.85	0.11	1.26	1.19	2.65	0.12	17.58	21.12	1.06	0.07	99.01
T709	131	94BCW319	till	0.5-0.84	green	Cr-diopside	54.18	0.16	1.28	1.19	2.54	0.09	17.84	20.95	1.04	0.07	99.33
T692	90	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.74	0.06	18.53	6.10	7.42	0.40	20.60	5.29	0.04	0.00	100.18
T692	91	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.36	0.17	19.02	5.59	7.20	0.35	20.84	5.30	0.03	0.01	99.86
T692	92	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.83	0.34	19.30	5.05	7.88	0.39	20.71	5.34	0.01	0.00	100.85
T692	93	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.77	0.60	18.09	6.31	8.11	0.49	19.72	5.54	0.04	0.01	100.68
T692	94	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.54	0.20	16.60	7.67	11.27	0.57	16.76	6.70	0.01	0.00	100.33
T692	95	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.40	0.73	16.18	8.55	6.85	0.38	20.11	6.49	0.03	0.00	100.72
T692	96	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.25	0.08	18.03	7.07	7.70	0.50	20.12	5.83	0.03	0.01	100.62
T692	97	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.92	0.40	19.15	4.76	7.87	0.43	19.91	6.05	0.04	0.01	100.53
T692	98	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.65	0.22	18.04	6.82	7.15	0.37	20.70	5.58	0.03	0.01	100.57
T692	99	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.98	0.15	18.78	5.75	7.49	0.38	20.42	5.62	0.01	0.01	100.59
T692	100	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.95	0.30	17.66	7.50	7.14	0.40	20.84	5.36	0.04	0.00	101.19
T692	101	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.39	0.05	16.50	9.15	7.11	0.43	19.81	6.07	0.00	0.01	100.52
T692	102	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.85	0.16	17.34	7.63	7.59	0.45	19.60	6.54	0.00	0.02	101.18
T692	103	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.36	0.00	17.56	8.01	7.80	0.57	19.09	6.37	0.00	0.02	100.78
T692	104	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.37	0.41	18.60	5.39	8.34	0.40	19.17	6.90	0.03	0.00	100.61
T692	105	94BCW319	till	0.25-0.5	red	Cr-pyrope	40.91	0.28	18.92	4.38	12.16	0.55	16.97	6.41	0.00	0.02	100.59
T692	106	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.20	0.17	19.48	4.75	7.52	0.39	20.99	4.98	0.03	0.02	100.52
T692	107	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.65	0.21	17.10	8.24	6.91	0.39	20.20	6.06	0.00	0.00	100.76
T692	108	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.89	0.08	18.53	6.28	7.15	0.42	20.44	5.66	0.00	0.02	100.46
T692	109	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.45	0.09	16.53	8.90	7.01	0.34	19.50	6.61	0.00	0.00	100.44
T692	110	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.23	0.18	16.42	9.31	7.20	0.41	19.80	6.21	0.02	0.00	100.78
T692	111	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.41	0.01	16.97	8.69	6.96	0.38	20.76	5.11	0.00	0.02	100.30
T692	112	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.72	0.05	16.50	9.65	7.01	0.45	20.95	4.47	0.01	0.00	100.81
T692	113	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.48	0.08	17.74	7.68	7.18	0.40	19.53	6.54	0.00	0.02	100.64
T692	114	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.93	0.06	17.44	8.00	7.57	0.53	19.92	5.76	0.00	0.00	100.21
T692	115	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.45	0.04	17.30	8.14	7.47	0.49	19.87	5.68	0.02	0.01	100.47
T692	116	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	17.92	6.95	7.21	0.36	20.44	5.65	0.01	0.00	100.49
T692	117	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.46	0.07	18.00	7.08	7.20	0.40	20.56	5.65	0.01	0.01	100.45

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T692	118	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.03	0.22	16.86	8.14	7.55	0.51	19.00	6.40	0.00	0.00	99.72
T692	119	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.55	0.00	18.44	7.06	8.15	0.54	18.91	6.14	0.00	0.01	100.77
T692	120	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.49	0.14	17.07	8.43	7.67	0.41	18.99	6.59	0.01	0.01	100.82
T692	121	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.60	0.41	18.94	5.29	7.56	0.42	20.83	5.46	0.03	0.00	100.53
T692	122	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.81	0.52	19.35	4.43	8.33	0.46	19.45	6.44	0.03	0.00	100.82
T692	123	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.91	0.25	19.52	4.83	7.21	0.36	21.44	5.20	0.00	0.02	100.73
T692	124	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.71	0.48	19.16	4.46	8.45	0.44	19.33	6.47	0.02	0.01	100.52
T692	125	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.91	0.34	17.85	6.83	7.43	0.38	20.20	5.86	0.00	0.02	100.83
T692	126	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.79	0.10	18.13	7.08	7.27	0.43	20.48	5.55	0.01	0.01	100.85
T692	127	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.65	0.35	18.77	5.56	7.52	0.36	20.40	5.63	0.00	0.00	100.23
T692	128	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.63	0.31	19.22	4.87	8.14	0.37	20.24	5.82	0.05	0.01	100.65
T692	129	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.94	0.05	20.29	4.36	7.52	0.42	21.44	4.84	0.00	0.00	100.85
T692	130	94BCW319	till	0.25-0.5	purple	Cr-pyrope	37.54	0.33	18.02	5.49	7.56	0.31	18.72	4.79	0.25	0.18	93.18
T692	131	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.27	0.39	16.71	8.35	7.35	0.42	19.84	6.44	0.03	0.00	100.79
T692	132	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.43	0.00	16.83	8.85	7.29	0.42	19.02	7.04	0.00	0.00	100.87
T692	133	94BCW319	till	0.25-0.5	purple	Cr-pyrope	42.29	0.25	20.84	3.00	7.13	0.30	21.85	4.76	0.01	0.01	100.44
T692	134	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.28	0.04	18.10	7.02	7.47	0.43	19.95	5.92	0.00	0.00	100.21
T692	135	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.18	0.09	17.38	8.31	7.29	0.41	20.41	5.10	0.02	0.01	100.19
T692	136	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.26	0.52	17.04	7.69	7.45	0.40	20.30	5.88	0.04	0.01	100.59
T692	137	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.72	0.34	17.80	7.08	7.57	0.42	20.22	5.66	0.02	0.01	100.85
T692	138	94BCW319	till	0.25-0.5	purple	Cr-pyrope	41.88	0.16	19.54	4.62	8.03	0.42	20.56	5.31	0.00	0.01	100.52
T692	139	94BCW319	till	0.25-0.5	orange	Spessartine	36.39	0.07	19.24	0.00	21.44	21.24	0.45	1.26	0.00	0.00	100.09
T693	1	94BCW319	till	0.25-0.5	black	chromite*	0.12	0.06	8.60	64.30	15.12	0.37	12.04	0.02	0.01	0.01	100.65
T693	2	94BCW319	till	0.25-0.5	black	Ilmenite	0.12	54.05	0.04	0.10	45.18	0.12	1.55	0.01	0.00	0.01	101.18
T693	3	94BCW319	till	0.25-0.5	black	chromite*	0.11	0.09	7.65	63.54	18.28	0.31	10.69	0.00	0.03	0.01	100.71
T693	4	94BCW319	till	0.25-0.5	black	Ilmenite	0.10	53.55	0.02	0.09	44.80	2.56	0.09	0.00	0.00	0.01	101.22
T693	5	94BCW319	till	0.25-0.5	black	Ilmenite	0.07	52.66	0.05	0.08	46.52	0.99	0.19	0.03	0.01	0.00	100.60
T693	6	94BCW319	till	0.25-0.5	black	chromite	0.10	3.49	1.88	55.54	29.70	0.47	8.96	0.00	0.00	0.01	100.16
T693	7	94BCW319	till	0.25-0.5	grey	Hematite	0.11	0.00	0.02	0.04	90.01	0.02	0.00	0.01	0.00	0.01	90.21
T693	8	94BCW319	till	0.25-0.5	black	Ilmenite	0.08	52.17	0.11	0.06	48.34	0.47	0.42	0.01	0.01	0.01	101.69
T693	9	94BCW319	till	0.25-0.5	black	Ilmenite	0.10	52.07	0.04	0.07	47.81	0.59	0.30	0.00	0.00	0.01	101.00
T693	10	94BCW319	till	0.25-0.5	black	Ilmenite	0.12	51.95	0.09	0.04	48.12	0.51	0.30	0.02	0.01	0.01	101.17
T693	11	94BCW319	till	0.25-0.5	black	chromite*	0.13	0.55	2.71	67.03	19.47	0.32	10.97	0.03	0.01	0.00	101.21
T693	12	94BCW319	till	0.25-0.5	black	Ilm. + Hem.	0.11	17.50	0.17	0.21	75.02	0.16	0.22	0.00	0.00	0.00	93.39
T693	13	94BCW319	till	0.25-0.5	black	Ilmenite	0.06	51.06	0.09	0.06	48.33	0.70	0.28	0.00	0.00	0.00	100.58
T693	14	94BCW319	till	0.25-0.5	black	Ilmenite	0.09	52.28	0.04	0.04	46.26	2.13	0.05	0.00	0.01	0.00	100.91
T693	15	94BCW319	till	0.25-0.5	black	Ilmenite	0.08	51.98	0.05	0.07	47.58	0.81	0.50	0.02	0.00	0.02	101.10
T693	16	94BCW319	till	0.25-0.5	black	Rutile	0.06	99.14	0.05	0.26	0.13	0.02	0.00	0.03	0.00	0.00	99.68
T693	17	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.68	0.12	1.51	4.20	2.24	0.08	16.29	18.15	2.49	0.04	99.78
T693	18	94BCW319	till	0.25-0.5	green	Cr-diopside	52.87	0.07	1.21	1.17	2.64	0.12	16.49	21.31	0.97	0.07	96.92
T693	19	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.49	0.30	1.17	1.63	2.37	0.11	17.19	21.54	1.38	0.05	100.22
T693	20	94BCW319	till	0.25-0.5	green	Cr-diopside	54.56	0.03	1.61	1.37	2.54	0.10	17.49	20.66	1.39	0.05	99.78
T693	21	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.71	0.35	1.87	1.80	2.85	0.09	16.93	19.47	1.78	0.02	99.87
T693	22	94BCW319	till	0.25-0.5	green	Cr-diopside	55.38	0.13	0.71	1.27	2.46	0.13	17.46	22.93	0.95	0.02	101.44
T693	23	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.82	0.29	1.59	1.81	2.82	0.10	17.29	19.92	1.63	0.05	100.32
T693	24	94BCW319	till	0.25-0.5	green	Cr-diopside	54.71	0.30	1.43	1.21	2.57	0.14	17.51	20.97	1.22	0.06	100.11
T693	25	94BCW319	till	0.25-0.5	green	Cr-diopside	54.82	0.17	1.63	1.33	2.57	0.10	17.71	20.67	1.36	0.03	100.38
T693	26	94BCW319	till	0.25-0.5	green	Cr-diopside	54.50	0.14	1.59	1.49	2.53	0.15	17.33	20.79	1.42	0.04	99.98
T693	27	94BCW319	till	0.25-0.5	green	Cr-diopside	55.01	0.28	1.58	1.25	2.62	0.06	17.67	20.74	1.33	0.03	100.56
T693	28	94BCW319	till	0.25-0.5	green	Cr-diopside	54.92	0.12	1.43	1.32	2.64	0.08	17.83	20.93	1.17	0.07	100.51
T693	29	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.56	0.14	1.15	1.64	2.44	0.09	17.23	21.56	1.22	0.05	100.08
T693	30	94BCW319	till	0.25-0.5	green	Cr-diopside	55.32	0.14	1.62	0.91	2.67	0.10	18.02	20.53	1.25	0.08	100.63

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T693	31	94BCW319	till	0.25-0.5	green	Cr-diopside	54.34	0.02	1.18	1.07	2.78	0.12	18.25	21.00	1.00	0.07	99.83
T693	32	94BCW319	till	0.25-0.5	green	Cr-diopside	55.25	0.17	0.46	1.32	1.79	0.08	17.62	23.52	0.79	0.01	101.00
T693	33	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.29	0.11	1.74	1.71	2.59	0.13	16.79	20.76	1.55	0.04	99.71
T693	34	94BCW319	till	0.25-0.5	green	Cr-diopside	54.58	0.00	0.37	1.45	1.80	0.06	17.17	23.52	0.95	0.02	99.93
T693	35	94BCW319	till	0.25-0.5	green	Cr-diopside	54.57	0.02	1.32	1.21	2.67	0.16	17.99	21.02	1.15	0.06	100.16
T693	36	94BCW319	till	0.25-0.5	green	Cr-diopside	54.82	0.10	0.42	1.15	1.80	0.08	17.44	23.89	0.81	0.01	100.53
T693	37	94BCW319	till	0.25-0.5	green	HiCr-diopsid	55.09	0.24	1.40	2.60	2.36	0.08	16.66	20.46	1.64	0.05	100.59
T693	38	94BCW319	till	0.25-0.5	green	Cr-diopside	54.79	0.13	1.40	1.17	2.73	0.15	17.62	21.66	1.06	0.06	100.76
T693	39	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.39	0.22	0.90	2.38	1.91	0.09	17.02	21.82	1.38	0.05	100.14
T693	40	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.98	0.23	1.63	1.59	2.88	0.10	16.80	20.49	1.69	0.04	100.42
T693	41	94BCW319	till	0.25-0.5	green	HiCr-diopsid	55.37	0.07	0.91	2.16	1.81	0.10	17.28	21.70	1.27	0.03	100.69
T693	42	94BCW319	till	0.25-0.5	green	HiCr-diopsid	54.69	0.11	1.48	1.79	2.47	0.06	16.90	20.33	1.69	0.06	99.58
T693	43	94BCW319	till	0.25-0.5	green	Cr-diopside	54.59	0.19	1.38	1.18	2.67	0.11	17.65	21.09	1.15	0.06	100.07
T693	44	94BCW319	till	0.25-0.5	green	Cr-diopside	54.97	0.08	1.34	1.32	2.58	0.11	17.73	21.08	1.10	0.05	100.37
T693	45	94BCW319	till	0.25-0.5	green	Cr-diopside	54.86	0.13	1.31	1.16	2.61	0.13	17.90	21.19	1.05	0.07	100.40
T693	46	94BCW319	till	0.25-0.5	green	Cr-diopside	54.25	0.00	1.07	0.65	3.62	0.15	17.11	23.05	0.51	0.00	100.41
T711	1	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.83	0.00	19.22	6.70	7.45	0.47	22.55	3.20	0.00	0.00	101.42
T711	2	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.92	0.17	17.65	8.18	7.12	0.41	20.32	6.14	0.03	0.01	100.94
T711	3	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.48	0.00	18.26	7.25	7.51	0.40	20.18	6.06	0.00	0.02	101.15
T711	4	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.52	0.31	17.18	8.37	6.53	0.39	20.67	6.11	0.04	0.00	101.13
T711	5	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.85	0.00	18.89	6.61	7.72	0.49	20.08	5.89	0.00	0.00	100.54
T711	6	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.22	0.19	16.51	8.56	7.43	0.35	19.32	6.67	0.00	0.00	100.24
T711	7	94BCW319	till	0.5-0.84	purple	Cr-pyrope	42.41	0.38	20.17	4.21	7.83	0.37	21.45	4.79	0.04	0.01	101.66
T711	8	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.99	0.48	17.29	7.97	7.24	0.41	20.24	5.93	0.02	0.02	100.57
T711	9	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.96	0.27	19.22	5.46	7.41	0.46	21.22	4.88	0.00	0.01	100.88
T711	10	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.84	0.00	18.82	6.96	8.04	0.47	19.73	6.37	0.01	0.00	101.23
T711	11	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.08	0.00	17.85	8.09	7.03	0.44	20.27	5.75	0.01	0.00	100.52
T711	12	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.33	0.27	20.10	4.25	7.87	0.41	21.17	4.79	0.02	0.02	100.21
T711	13	94BCW319	till	0.5-0.84	purple	quartz	101.05	0.07	0.03	0.03	0.12	0.00	0.01	0.01	0.00	0.01	101.33
T711	14	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.08	0.05	19.31	6.25	7.19	0.53	20.94	5.32	0.01	0.00	100.67
T711	15	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.80	0.01	18.88	6.59	7.21	0.63	20.95	5.15	0.00	0.00	101.22
T711	16	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.23	0.06	18.54	6.15	7.76	0.37	20.39	5.72	0.01	0.00	100.22
T711	17	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.28	0.03	19.36	6.11	7.31	0.50	21.03	4.94	0.01	0.01	100.56
T711	18	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.71	0.00	19.33	6.03	7.29	0.48	20.84	5.09	0.00	0.01	100.79
T711	19	94BCW319	till	0.5-0.84	purple	Cr-pyrope	40.75	0.01	17.20	8.76	7.90	0.53	18.55	6.98	0.01	0.01	100.70
T711	20	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.88	0.10	19.59	5.82	7.16	0.56	21.25	4.85	0.03	0.01	101.23
T711	21	94BCW319	till	0.5-0.84	orange	Cr-pyrope	41.59	0.41	19.86	4.16	8.53	0.39	20.59	5.66	0.05	0.00	101.23
T711	22	94BCW319	till	0.5-0.84	orange	almandine	39.86	0.06	21.67	0.05	22.16	1.15	8.50	7.69	0.00	0.01	101.16
T711	23	94BCW319	till	0.5-0.84	orange	almandine	37.19	0.05	21.06	0.08	28.52	2.78	1.98	9.31	0.01	0.00	100.98
T711	24	94BCW319	till	0.5-0.84	pl green	olivine	40.73	0.06	0.04	0.04	7.55	0.12	51.61	0.06	0.00	0.00	100.20
T711	25	94BCW319	till	0.5-0.84	pl green	olivine	40.85	0.06	0.03	0.05	8.43	0.17	51.72	0.05	0.00	0.01	101.37
T711	26	94BCW319	till	0.5-0.84	green	Cr-diopside	54.04	0.25	1.62	1.33	2.66	0.11	17.57	20.43	1.37	0.05	99.41
T711	27	94BCW319	till	0.5-0.84	green	Cr-diopside	54.36	0.25	1.36	1.17	2.69	0.09	17.67	20.91	1.17	0.05	99.72
T711	28	94BCW319	till	0.5-0.84	green	Cr-diopside	54.20	0.18	0.95	1.08	2.62	0.07	17.91	22.45	1.00	0.02	100.47
T711	29	94BCW319	till	0.5-0.84	green	Cr-diopside	54.40	0.18	1.29	0.98	2.52	0.11	17.67	21.26	1.20	0.04	99.66
T711	30	94BCW319	till	0.5-0.84	green	Cr-diopside	50.77	0.08	1.14	1.04	2.60	0.09	16.05	21.45	0.84	0.06	94.13
T711	31	94BCW319	till	0.5-0.84	green	Cr-diopside	54.30	0.22	1.50	1.18	3.11	0.12	17.64	21.03	1.25	0.05	100.40
T711	32	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.43	0.27	1.83	1.63	2.52	0.08	17.[illegible]	19.25	1.87	0.02	99.37
T711	33	94BCW319	till	0.5-0.84	green	Cr-diopside	54.05	0.20	1.63	1.28	2.71	0.06	17.54	20.63	1.36	0.04	99.51
T711	34	94BCW319	till	0.5-0.84	green	HiCr-diopsid	54.68	0.11	1.65	1.53	2.62	0.10	17.91	20.36	1.43	0.05	100.43
T711	35	94BCW319	till	0.5-0.84	green	Cr-diopside	54.15	0.16	1.39	1.06	2.95	0.13	18.73	19.91	1.14	0.05	99.67
T711	36	94BCW319	till	0.5-0.84	green	HiCr-diopsid	53.70	0.21	1.33	2.31	2.44	0.13	16.93	20.38	1.70	0.03	99.15

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T711	37	94BCW319	till	0.5-0.84	green	Cr-diopside	56.15	0.13	2.43	0.99	3.39	0.29	18.42	20.01	0.65	0.04	102.50
T711	38	94BCW319	till	0.5-0.84	green	diopside	54.55	0.35	1.86	0.48	3.04	0.12	17.64	20.71	1.41	0.03	100.18
T671	112	94BCW319	till	0.25-0.5	black	ilmenite	0.00	52.16	0.02	0.01	46.19	0.82	0.41	0.02	0.04	0.00	99.65
T671	113	94BCW319	till	0.25-0.5	black	ilmenite	0.00	49.87	0.04	0.02	48.02	0.87	0.19	0.02	0.00	0.01	99.02
T671	114	94BCW319	till	0.25-0.5	green	Cr-diopside	52.24	0.18	1.31	0.82	3.27	0.09	17.82	22.76	0.34	0.01	98.84
T711	39	94BCW319	till	0.5-0.84	purple	Cr-pyrope	41.83	0.31	19.11	5.88	7.88	0.45	21.06	5.05	0.01	0.01	101.60
T711	40	94BCW319	till	0.5-0.84	orange	almandine	37.51	0.10	20.88	0.07	27.94	1.58	2.19	10.05	0.00	0.00	100.31
T671	115	94BCW319	till	0.25-0.5	green	diopside	52.14	0.06	1.04	0.15	5.14	0.21	16.88	22.75	0.35	0.01	98.72
T711	41	94BCW319	till	0.5-0.84	orange	almandine	37.27	0.00	20.80	0.06	26.57	2.03	2.33	10.72	0.00	0.02	99.79
T711	42	94BCW319	till	0.5-0.84	orange	almandine	37.42	0.08	20.96	0.00	26.50	0.76	2.89	11.38	0.01	0.00	99.99
T711	43	94BCW319	till	0.5-0.84	pl green	olivine	40.30	0.06	0.01	0.08	8.85	0.12	51.23	0.04	0.00	0.01	100.69
T671	116	94BCW319	till	0.25-0.5	purple	Cr-pyrope	40.23	0.35	18.20	6.47	7.22	0.41	20.32	5.27	0.02	0.02	98.50
T671	117	94BCW319	till	0.25-0.5	green	diopside	52.53	0.12	0.89	0.48	4.44	0.18	17.07	22.91	0.45	0.01	99.07
T671	118	94BCW319	till	0.25-0.5	green	diopside	52.83	0.00	0.49	0.18	5.67	0.24	15.90	23.70	0.37	0.00	99.37
T671	119	94BCW319	till	0.25-0.5	green	Cr-diopside	50.85	0.18	3.57	0.51	4.63	0.12	16.05	22.95	0.38	0.01	99.24
T671	120	94BCW319	till	0.25-0.5	green	diopside	51.54	0.03	2.02	0.30	5.29	0.18	16.23	22.48	0.38	0.00	98.45
T671	121	94BCW319	till	0.25-0.5	green	diopside	52.67	0.12	1.40	0.08	4.40	0.14	16.87	23.03	0.46	0.01	99.18
T671	122	94BCW319	till	0.25-0.5	green	diopside	52.19	0.00	0.90	0.00	6.17	0.33	16.01	22.92	0.29	0.00	98.82
T711	44	94BCW319	till	0.5-0.84	orange	almandine	37.85	0.04	21.33	0.01	26.71	0.73	4.19	9.57	0.01	0.00	100.42
T711	45	94BCW319	till	0.5-0.84	orange	almandine	37.47	0.15	20.86	0.07	27.09	3.08	2.15	9.65	0.00	0.00	100.52
T711	46	94BCW319	till	0.5-0.84	orange	almandine	38.29	0.04	21.01	0.03	29.45	0.87	4.39	7.09	0.00	0.02	101.20
T711	47	94BCW319	till	0.5-0.84	orange	almandine	37.19	0.02	20.96	0.05	28.58	1.94	2.18	9.57	0.00	0.01	100.49
T711	48	94BCW319	till	0.5-0.84	pl green	olivine	40.83	0.00	0.04	0.08	8.51	0.10	51.57	0.07	0.01	0.01	101.23
T711	49	94BCW319	till	0.5-0.84	pl green	olivine	40.17	0.02	0.03	0.06	8.06	0.12	51.22	0.04	0.00	0.02	99.73
T672	1	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.81	0.01	18.11	8.02	6.88	0.47	22.44	2.30	0.00	0.00	100.03
T672	2	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.25	17.15	8.48	6.88	0.41	19.95	6.30	0.00	0.01	100.75
T672	3	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.09	0.12	16.74	9.25	7.32	0.43	19.62	6.36	0.00	0.00	100.93
T672	4	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.05	0.02	20.35	5.10	8.44	0.57	19.33	5.95	0.00	0.01	101.82
T672	5	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.54	0.31	19.61	4.96	8.35	0.46	19.43	6.53	0.01	0.00	101.19
T672	6	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.62	0.05	18.08	6.58	7.39	0.46	18.90	6.04	0.04	0.02	98.17
T672	7	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.18	0.03	20.00	4.85	7.53	0.39	20.33	5.36	0.01	0.01	99.69
T672	8	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.08	0.03	18.50	7.14	7.44	0.53	19.69	5.54	0.04	0.00	99.99
T672	9	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.88	0.43	18.85	5.85	6.84	0.38	20.96	5.35	0.01	0.00	100.55
T672	10	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.93	0.05	16.72	9.38	6.94	0.35	19.67	6.05	0.00	0.00	100.08
T672	11	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.49	0.06	18.99	6.78	7.51	0.48	20.57	4.23	0.01	0.00	100.13
T672	12	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.78	0.18	18.19	7.04	7.13	0.33	20.05	5.88	0.01	0.00	100.59
T672	13	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.61	0.27	18.09	6.95	7.40	0.39	20.09	5.84	0.02	0.00	100.66
T672	14	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.60	0.12	18.21	7.02	7.29	0.41	19.85	5.57	0.00	0.00	99.06
T672	15	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.95	0.23	15.72	9.68	9.70	0.55	16.77	7.57	0.03	0.00	100.20
T672	16	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.83	0.25	18.04	6.57	7.06	0.34	19.93	6.09	0.00	0.00	99.11
T672	17	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.93	0.26	20.10	4.60	7.62	0.36	20.95	5.15	0.05	0.00	101.02
T672	18	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.55	0.32	19.34	4.91	8.08	0.43	19.66	6.15	0.06	0.00	100.48
T672	19	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.02	0.46	20.28	3.80	7.62	0.34	21.04	4.97	0.03	0.01	100.57
T672	20	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.44	0.51	18.19	6.47	7.71	0.41	19.81	5.65	0.06	0.01	100.26
T672	21	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.97	0.35	19.57	5.25	7.64	0.37	20.30	5.53	0.02	0.00	100.99
T672	22	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.66	0.27	21.14	3.36	7.80	0.37	21.32	4.58	0.02	0.00	100.52
T672	23	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.78	0.29	19.38	4.95	7.41	0.28	20.75	5.44	0.00	0.01	100.30
T672	24	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.77	0.13	19.46	5.91	6.91	0.38	20.36	5.61	0.00	0.00	100.51
T672	25	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.24	0.04	18.22	7.15	6.91	0.48	19.90	5.98	0.04	0.00	99.96
T672	26	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.41	0.21	18.08	7.11	7.31	0.40	19.93	5.88	0.05	0.01	100.39
T672	27	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.40	0.02	18.56	7.67	6.97	0.43	22.75	2.17	0.02	0.02	99.98
T672	28	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.43	0.17	18.42	7.14	7.02	0.43	20.45	5.37	0.00	0.00	100.43

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	29	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.03	17.67	8.58	7.37	0.41	20.97	4.07	0.00	0.00	100.40
T672	30	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.81	0.26	19.96	5.04	7.79	0.41	20.47	5.20	0.02	0.00	100.94
T672	31	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.76	0.02	16.81	9.36	7.32	0.46	18.47	7.26	0.00	0.00	100.45
T672	32	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.47	0.08	17.70	7.80	6.63	0.38	20.31	5.81	0.01	0.00	100.20
T672	33	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.02	19.12	6.26	8.01	0.46	19.07	6.02	0.02	0.02	100.26
T672	34	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.90	0.07	18.50	6.18	8.20	0.53	18.73	6.11	0.00	0.00	98.24
T672	35	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.36	0.39	16.96	7.97	7.11	0.36	19.81	6.29	0.02	0.01	100.28
T672	36	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.67	0.20	21.33	3.27	7.89	0.41	20.97	4.48	0.00	0.00	100.22
T672	37	94BCW320	till	0.25-0.5	orange	almandine	38.33	0.05	21.38	0.00	26.02	2.08	3.08	9.97	0.00	0.01	100.91
T672	38	94BCW320	till	0.25-0.5	orange	almandine	37.22	0.07	20.75	0.00	28.30	1.13	1.88	10.14	0.02	0.00	99.50
T672	39	94BCW320	till	0.25-0.5	orange	almandine	37.59	0.14	21.19	0.01	27.24	2.19	2.33	9.56	0.02	0.00	100.28
T672	40	94BCW320	till	0.25-0.5	orange	almandine	37.21	0.08	20.76	0.02	29.13	0.24	1.47	11.22	0.01	0.02	100.15
T672	41	94BCW320	till	0.25-0.5	emerald	HiCr-diopsid	53.85	0.18	1.65	1.71	2.38	0.16	17.07	20.57	1.47	0.05	99.07
T672	42	94BCW320	till	0.25-0.5	green	Cr-diopside	54.27	0.23	1.42	0.84	2.57	0.10	17.76	21.56	1.07	0.09	99.90
T672	43	94BCW320	till	0.25-0.5	green	Cr-diopside	53.85	0.27	1.63	1.19	2.78	0.14	17.24	20.63	1.33	0.05	99.10
T672	44	94BCW320	till	0.25-0.5	green	Cr-diopside	54.17	0.17	1.58	1.27	2.40	0.10	17.86	20.69	1.39	0.02	99.64
T672	45	94BCW320	till	0.25-0.5	green	Cr-diopside	54.03	0.17	1.69	1.43	2.47	0.03	17.42	20.66	1.41	0.04	99.34
T672	46	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.61	0.10	0.04	47.16	0.54	0.25	0.01	0.04	0.01	97.76
T672	47	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.99	0.10	0.05	48.12	0.47	0.51	0.00	0.00	0.00	98.24
T672	48	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.35	0.04	0.01	44.19	2.78	0.08	0.00	0.00	0.01	99.44
T672	49	94BCW320	till	0.25-0.5	black	Mg-ilmenite	0.00	51.56	0.35	4.64	28.07	0.28	13.02	0.02	0.00	0.02	97.96
T672	50	94BCW320	till	0.25-0.5	black	chromite	0.13	3.53	3.97	55.00	25.21	0.42	10.49	0.00	0.00	0.02	98.75
T672	51	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.23	0.10	0.00	47.17	0.43	0.50	0.01	0.00	0.00	97.45
T672	52	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.51	0.09	0.04	48.14	0.76	0.29	0.00	0.00	0.01	97.85
T672	53	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.08	0.01	0.00	46.66	3.33	0.46	0.01	0.00	0.00	97.55
T672	54	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.70	0.05	0.00	46.84	0.42	0.30	0.00	0.00	0.02	97.33
T672	55	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.63	0.02	0.01	44.30	2.81	0.15	0.03	0.00	0.01	99.95
T672	56	94BCW320	till	0.25-0.5	black	chromite	0.33	2.78	2.31	55.62	26.83	0.46	9.20	0.01	0.00	0.00	97.53
T672	57	94BCW320	till	0.25-0.5	black	ilmenite	0.08	50.02	0.09	0.05	46.16	0.50	0.91	0.02	0.00	0.01	97.83
T672	58	94BCW320	till	0.25-0.5	black	Cr-spinel	1.85	0.02	50.95	12.74	11.48	0.09	18.03	0.03	0.00	0.02	95.21
T672	59	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.44	0.09	0.00	48.45	0.50	0.41	0.02	0.00	0.00	97.91
T711	50	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.22	0.00	19.24	5.72	7.53	0.36	20.85	5.27	0.00	0.00	100.18
T711	51	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.40	0.04	19.61	5.31	7.53	0.51	20.42	5.58	0.01	0.00	100.40
T711	52	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.29	0.21	19.78	4.41	7.94	0.38	21.12	5.17	0.00	0.00	100.29
T711	53	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.61	0.00	18.15	7.36	7.14	0.40	20.17	6.21	0.00	0.00	100.04
T711	54	94BCW320	till	0.5-0.84	orange	almandine	38.40	0.08	20.63	0.05	28.87	1.31	2.55	9.85	0.02	0.00	101.75
T711	55	94BCW320	till	0.5-0.84	orange	almandine	36.76	0.04	20.75	0.06	28.45	1.58	2.24	9.66	0.01	0.01	99.56
T711	56	94BCW320	till	0.5-0.84	orange	almandine	37.19	0.05	20.89	0.03	29.09	0.43	3.31	9.23	0.02	0.02	100.26
T711	57	94BCW320	till	0.5-0.84	green	Cr-diopside	53.42	0.15	1.70	1.30	2.62	0.09	17.35	20.40	1.33	0.05	98.40
T711	58	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.93	0.23	0.81	1.50	2.34	0.08	17.12	21.83	1.12	0.05	99.02
T711	59	94BCW320	till	0.5-0.84	green	Cr-diopside	55.56	0.16	1.62	1.36	2.52	0.07	17.62	20.65	1.36	0.06	100.98
T711	60	94BCW320	till	0.5-0.84	green	Cr-diopside	54.02	0.03	1.32	1.25	2.63	0.10	17.85	21.22	1.12	0.07	99.60
T711	61	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.97	0.19	0.45	1.70	2.57	0.15	18.08	21.55	0.93	0.02	100.63
T711	62	94BCW320	till	0.5-0.84	green	Cr-diopside	54.52	0.17	1.39	1.11	2.53	0.07	18.03	21.06	1.11	0.05	100.05
T711	63	94BCW320	till	0.5-0.84	green	Cr-diopside	54.18	0.20	1.39	0.93	2.85	0.15	18.08	20.06	1.15	0.05	99.03
T711	64	94BCW320	till	0.5-0.84	green	Cr-diopside	54.83	0.07	1.29	1.27	2.63	0.10	18.35	20.33	1.11	0.05	100.01
T711	65	94BCW320	till	0.5-0.84	green	Cr-diopside	55.38	0.21	0.82	0.93	2.71	0.07	17.75	22.36	0.92	0.04	101.18
T711	66	94BCW320	till	0.5-0.84	pl green	enstatite	57.76	0.05	0.53	0.36	4.95	0.17	36.52	0.56	0.11	0.01	101.02
T672	60	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.02	18.29	7.64	6.63	0.37	19.71	6.66	0.03	0.01	100.27
T672	61	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.54	0.32	19.25	5.23	8.08	0.42	19.71	6.13	0.03	0.02	100.70
T672	62	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.20	0.24	18.27	7.13	7.02	0.36	20.38	5.45	0.02	0.00	100.08
T672	63	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.16	0.02	18.04	8.19	7.02	0.43	20.88	4.10	0.00	0.00	99.83

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	64	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.28	0.03	19.61	5.82	7.42	0.46	20.20	5.92	0.00	0.02	100.76
T672	65	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.28	0.31	19.65	4.98	7.44	0.33	20.54	5.42	0.01	0.04	100.01
T672	66	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.31	0.43	19.67	4.67	8.12	0.35	19.41	6.32	0.01	0.00	100.29
T672	67	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.13	0.07	18.06	7.47	7.04	0.51	20.42	5.58	0.00	0.01	100.29
T672	68	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.65	0.15	20.22	4.20	7.63	0.36	21.15	5.25	0.00	0.02	100.61
T672	69	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.29	0.54	18.98	4.74	8.55	0.32	20.14	5.40	0.02	0.04	100.02
T672	70	94BCW320	till	0.25-0.5	orange	almandine	37.79	0.10	21.20	0.01	31.16	1.39	4.02	5.26	0.00	0.00	100.93
T672	71	94BCW320	till	0.25-0.5	green	Cr-diopside	54.86	0.20	0.94	1.26	2.43	0.07	17.62	22.38	1.06	0.04	100.86
T672	72	94BCW320	till	0.25-0.5	green	Cr-diopside	52.65	0.09	2.31	1.09	4.70	0.23	15.57	21.94	0.89	0.00	99.45
T672	73	94BCW320	till	0.25-0.5	green	diopside	51.26	0.20	2.73	0.27	5.38	0.17	15.68	20.56	0.66	0.21	97.12
T672	74	94BCW320	till	0.25-0.5	black	rutile	0.00	94.61	0.05	0.00	1.41	0.01	0.04	0.02	0.00	0.00	96.14
T672	75	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.55	0.07	0.02	46.74	0.61	0.40	0.02	0.00	0.00	97.40
T672	76	94BCW320	till	0.25-0.5	black	chromite	0.14	4.10	4.10	51.38	27.90	0.35	9.82	0.04	0.00	0.00	97.81
T672	77	94BCW320	till	0.25-0.5	black	ilmenite	0.00	45.67	0.05	0.02	49.09	1.20	1.24	0.01	0.00	0.01	97.28
T672	78	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.30	0.08	0.04	47.87	0.42	0.69	0.03	0.00	0.02	97.44
T672	79	94BCW320	till	0.25-0.5	black	ilmenite	0.15	49.65	0.05	0.03	47.27	0.43	0.41	0.01	0.00	0.01	98.01
T672	80	94BCW320	till	0.25-0.5	black	ilmenite	0.12	44.88	0.02	0.00	51.46	0.41	0.07	0.02	0.01	0.02	97.01
T672	81	94BCW320	till	0.25-0.5	grey	hematite	0.10	0.00	0.07	0.00	91.99	0.16	0.05	0.01	0.00	0.01	92.40
T672	82	94BCW320	till	0.25-0.5	black	chromite*	0.71	0.54	1.65	64.12	19.85	0.39	11.62	0.03	0.10	0.01	99.03
T672	83	94BCW320	till	0.25-0.5	black	chromite	0.14	1.09	24.18	40.67	20.29	0.40	11.63	0.03	0.02	0.01	98.46
T672	84	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.57	0.08	0.01	45.39	1.09	0.15	0.00	0.00	0.00	98.30
T672	85	94BCW320	till	0.25-0.5	black	ilmenite	0.00	46.75	0.05	0.02	49.52	0.49	0.66	0.00	0.02	0.01	97.51
T672	86	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.78	0.04	0.03	46.20	0.23	0.29	0.01	0.03	0.00	98.62
T672	87	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.29	0.03	0.03	45.69	0.25	0.64	0.04	0.00	0.00	98.97
T711	67	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.72	0.16	17.41	8.16	6.98	0.43	20.55	5.53	0.00	0.01	100.96
T711	68	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.41	0.42	19.15	5.48	7.38	0.43	21.23	4.95	0.05	0.00	100.49
T711	69	94BCW320	till	0.5-0.84	orange	almandine	37.94	0.03	20.74	0.07	24.82	1.99	2.10	12.25	0.00	0.00	99.94
T711	70	94BCW320	till	0.5-0.84	orange	almandine	37.57	0.19	20.61	0.07	26.55	2.73	3.49	8.97	0.02	0.03	100.22
T711	71	94BCW320	till	0.5-0.84	orange	almandine	37.39	0.03	21.20	0.04	29.71	0.70	4.41	6.55	0.02	0.00	100.04
T711	72	94BCW320	till	0.5-0.84	green	Cr-diopside	55.29	0.16	1.40	1.30	2.58	0.08	18.25	20.62	1.24	0.05	100.97
T711	73	94BCW320	till	0.5-0.84	green	Cr-diopside	54.71	0.00	1.26	1.09	2.70	0.12	18.55	20.65	1.04	0.05	100.15
T711	74	94BCW320	till	0.5-0.84	green	Cr-diopside	54.13	0.08	1.22	1.05	2.85	0.12	18.17	20.80	1.00	0.05	99.46
T711	75	94BCW320	till	0.5-0.84	pl green	olivine	39.40	0.03	0.00	0.07	9.94	0.10	50.51	0.06	0.00	0.01	100.12
T711	76	94BCW320	till	0.5-0.84	pl green	olivine	39.01	0.00	0.04	0.06	8.39	0.10	47.38	0.06	0.01	0.00	95.05
T711	77	94BCW320	till	0.5-0.84	pl green	olivine	42.57	0.00	1.03	0.07	8.66	0.10	50.16	0.12	0.00	0.02	102.73
T672	88	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.28	0.00	19.24	6.27	8.51	0.55	18.69	6.42	0.00	0.01	100.97
T672	89	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.53	0.07	0.19	46.23	0.56	0.11	0.02	0.00	0.01	98.70
T672	90	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.78	0.04	0.01	44.62	2.70	0.05	0.04	0.00	0.00	99.24
T672	91	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.66	0.08	0.02	47.54	0.70	0.19	0.01	0.03	0.00	98.22
T672	92	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.99	0.03	0.09	45.51	0.23	0.61	0.01	0.01	0.00	98.46
T672	93	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.65	0.04	0.00	47.62	0.39	0.29	0.01	0.02	0.00	98.03
T672	94	94BCW320	till	0.25-0.5	black	ilmenite	0.02	52.05	0.06	0.00	45.55	0.94	0.47	0.02	0.00	0.00	99.11
T672	95	94BCW320	till	0.25-0.5	black	rutile	0.00	97.92	0.06	0.31	0.11	0.00	0.00	0.02	0.02	0.02	98.46
T672	96	94BCW320	till	0.25-0.5	black	ilmenite	0.02	52.77	0.08	0.08	45.10	0.09	1.24	0.01	0.02	0.00	99.40
T672	97	94BCW320	till	0.25-0.5	black	ilmenite	0.00	45.12	0.06	0.08	49.44	1.59	0.35	0.00	0.00	0.00	96.64
T672	98	94BCW320	till	0.25-0.5	black	ilmenite	0.04	46.03	0.05	0.03	48.93	0.99	1.04	0.02	0.00	0.00	97.14
T672	99	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.66	0.02	0.01	46.73	0.26	0.22	0.01	0.00	0.02	98.92
T672	100	94BCW320	till	0.25-0.5	black	ilmenite	0.01	51.03	0.05	0.05	45.31	2.14	0.18	0.07	0.02	0.00	98.87
T672	101	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.00	0.06	0.06	46.59	0.42	0.59	0.02	0.02	0.01	97.77
T672	102	94BCW320	till	0.25-0.5	black	ilmenite	0.06	51.78	0.03	0.04	46.00	0.31	0.52	0.02	0.00	0.01	98.76
T672	103	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.19	0.03	0.01	47.38	0.60	0.08	0.03	0.00	0.01	98.32
T672	104	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.37	0.00	0.01	46.40	3.01	0.19	0.01	0.00	0.01	98.01

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	105	94BCW320	till	0.25-0.5	green	Cr-diopside	52.88	0.10	1.46	0.60	4.64	0.14	16.79	22.43	0.46	0.00	99.51
T672	106	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.76	0.17	19.33	6.07	7.26	0.42	20.82	5.12	0.00	0.00	100.93
T672	107	94BCW320	till	0.25-0.5	black	ilmenite	0.15	50.28	0.08	0.00	46.78	0.42	0.36	0.00	0.00	0.01	98.08
T672	108	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.77	0.10	0.04	47.02	0.50	0.57	0.00	0.00	0.00	98.01
T672	109	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.03	0.02	0.03	44.74	1.11	0.34	0.03	0.00	0.00	98.31
T672	110	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.93	0.05	0.01	45.62	0.20	0.50	0.01	0.00	0.01	98.31
T672	111	94BCW320	till	0.25-0.5	black	chromite	0.20	0.16	11.08	46.17	33.42	0.46	6.85	0.01	0.06	0.03	98.42
T672	112	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.06	0.09	0.03	46.24	0.54	0.83	0.00	0.02	0.00	97.83
T672	113	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.73	0.02	0.00	45.46	0.44	0.50	0.00	0.02	0.00	98.16
T672	114	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.23	0.05	0.00	47.20	0.51	0.11	0.00	0.00	0.00	100.09
T672	115	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.24	0.07	0.01	47.37	0.47	0.52	0.03	0.01	0.01	97.73
T672	116	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.02	0.04	0.03	47.05	0.59	0.10	0.01	0.04	0.00	97.87
T672	117	94BCW320	till	0.25-0.5	green	diopside	53.07	0.06	0.71	0.05	4.70	0.14	16.25	24.22	0.30	0.00	99.50
T672	118	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.08	0.01	0.01	45.77	1.42	0.10	0.01	0.00	0.01	98.42
T672	119	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.93	0.02	0.00	44.56	2.65	0.09	0.04	0.02	0.00	98.30
T672	120	94BCW320	till	0.25-0.5	black	ilmenite	0.66	53.41	0.10	0.02	32.94	3.59	0.09	0.02	0.00	0.02	90.84
T672	121	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.07	15.83	0.12	0.34	73.99	0.12	0.08	0.02	0.00	0.03	90.60
T672	122	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.46	0.08	0.04	46.08	0.57	0.20	0.04	0.00	0.00	98.46
T672	123	94BCW320	till	0.25-0.5	green	Cr-diopside	53.04	0.03	1.55	1.00	4.14	0.18	16.91	22.38	0.58	0.00	99.81
T672	124	94BCW320	till	0.25-0.5	green	diopside	52.88	0.09	1.56	0.31	5.33	0.14	17.28	21.89	0.36	0.00	99.84
T672	125	94BCW320	till	0.25-0.5	green	Cr-diopside	51.68	0.29	2.96	1.20	4.15	0.12	18.28	20.76	0.18	0.01	99.64
T672	126	94BCW320	till	0.25-0.5	green	diopside	53.12	0.01	1.33	0.00	3.39	0.67	16.48	25.01	0.07	0.01	100.07
T672	127	94BCW320	till	0.25-0.5	pl green	serpentine	40.22	0.00	0.01	0.06	8.13	0.10	50.51	0.05	0.00	0.01	99.09
T693	47	94BCW320	till	0.25-0.5	black	chromite	0.11	3.39	1.96	56.21	28.58	0.46	9.21	0.01	0.00	0.00	99.93
T693	48	94BCW320	till	0.25-0.5	black	Mg-Ilmenite	0.12	52.10	0.30	5.82	29.88	0.27	12.14	0.04	0.02	0.02	100.71
T693	49	94BCW320	till	0.25-0.5	black	Ilmenite	0.12	51.99	0.08	0.07	49.12	0.41	0.21	0.01	0.00	0.01	102.02
T693	50	94BCW320	till	0.25-0.5	black	Ilmenite	0.12	47.48	0.08	0.05	49.21	1.63	1.05	0.02	0.00	0.01	99.65
T693	51	94BCW320	till	0.25-0.5	black	chromite	0.14	3.03	1.81	59.18	27.83	0.46	9.42	0.03	0.00	0.01	101.92
T693	52	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	49.08	0.06	0.04	48.90	1.78	0.95	0.00	0.00	0.00	100.93
T693	53	94BCW320	till	0.25-0.5	black	chromite	0.12	3.20	3.20	57.70	25.66	0.40	10.12	0.04	0.00	0.00	100.44
T693	54	94BCW320	till	0.25-0.5	black	chromite*	0.21	0.09	6.44	62.69	19.65	0.35	11.31	0.01	0.00	0.00	100.74
T693	55	94BCW320	till	0.25-0.5	black	chromite*	0.15	0.01	4.77	64.09	21.09	0.34	10.16	0.00	0.06	0.03	100.70
T693	56	94BCW320	till	0.25-0.5	black	Tourmaline	36.98	0.12	31.67	0.00	11.21	0.14	4.54	0.22	2.01	0.04	86.92
T693	57	94BCW320	till	0.25-0.5	black	chromite*	0.13	0.92	2.65	66.47	19.66	0.34	10.85	0.04	0.00	0.00	101.06
T693	58	94BCW320	till	0.25-0.5	black	chromite	0.12	1.99	2.56	53.43	33.29	0.45	7.85	0.00	0.00	0.01	99.72
T693	59	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	47.35	0.03	0.07	50.46	1.45	0.43	0.03	0.00	0.02	99.94
T693	60	94BCW320	till	0.25-0.5	black	Mg-Ilmenite	0.11	52.32	0.38	5.48	29.09	0.34	12.78	0.02	0.00	0.00	100.50
T693	61	94BCW320	till	0.25-0.5	black	chromite	0.15	4.23	3.86	52.09	29.54	0.41	9.60	0.03	0.01	0.02	99.93
T693	62	94BCW320	till	0.25-0.5	black	chromite	0.14	3.52	2.39	56.27	28.53	0.46	9.26	0.00	0.00	0.01	100.57
T693	63	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	53.48	0.11	0.07	45.75	1.77	0.17	0.01	0.00	0.00	101.45
T693	64	94BCW320	till	0.25-0.5	black	Ilmenite	0.14	50.53	0.12	0.04	48.57	0.44	0.33	0.01	0.00	0.00	100.18
T693	65	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	50.89	0.11	0.05	47.28	0.49	0.95	0.01	0.00	0.00	99.87
T693	66	94BCW320	till	0.25-0.5	black	chromite*	0.12	1.26	2.47	64.34	22.24	0.41	9.86	0.01	0.00	0.01	100.72
T693	67	94BCW320	till	0.25-0.5	black	chromite	0.21	4.10	3.44	52.42	30.45	0.42	9.27	0.02	0.01	0.00	100.35
T693	68	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	54.30	0.03	0.04	45.00	2.55	0.07	0.00	0.00	0.00	102.12
T693	69	94BCW320	till	0.25-0.5	black	Ilmenite	0.16	49.24	0.05	0.05	49.55	2.05	0.54	0.04	0.00	0.02	101.69
T693	70	94BCW320	till	0.25-0.5	black	Ilmenite	0.08	51.41	0.16	0.08	48.64	0.48	0.28	0.00	0.00	0.01	101.13
T693	71	94BCW320	till	0.25-0.5	black	Hematite	0.13	0.03	0.02	0.39	89.36	0.09	0.03	0.01	0.00	0.00	90.05
T693	72	94BCW320	till	0.25-0.5	black	Cr-Spinel	0.09	0.11	32.76	35.65	13.04	0.20	16.36	0.03	0.01	0.01	98.28
T693	73	94BCW320	till	0.25-0.5	black	Ilm. + Hem.	0.11	29.60	0.05	0.08	64.63	0.73	0.06	0.01	0.01	0.00	95.28
T693	74	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	47.64	0.04	0.00	50.30	1.72	0.05	0.03	0.00	0.01	99.90
T693	75	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	50.21	0.05	0.06	47.57	1.96	0.01	0.04	0.00	0.00	100.03

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T693	76	94BCW320	till	0.25-0.5	black	Ilmenite	0.12	49.04	0.22	0.05	48.48	2.59	0.06	0.03	0.00	0.00	100.56
T693	77	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	49.21	0.05	0.06	47.98	2.94	0.27	0.00	0.02	0.00	100.65
T693	78	94BCW320	till	0.25-0.5	black	Ilm. + Hem.	0.09	13.55	0.06	0.11	79.51	0.12	0.02	0.03	0.00	0.02	93.50
T693	79	94BCW320	till	0.25-0.5	black	Ilmenite	0.09	54.06	0.04	0.03	46.77	0.50	0.24	0.00	0.00	0.00	101.73
T693	80	94BCW320	till	0.25-0.5	black	Amphibole	40.51	1.70	10.67	0.02	23.71	0.53	6.04	11.32	1.31	1.51	97.31
T693	81	94BCW320	till	0.25-0.5	black	Hematite	0.11	0.03	0.02	0.04	90.53	0.04	0.03	0.01	0.00	0.02	90.84
T693	82	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	49.50	0.05	0.04	47.85	3.26	0.32	0.01	0.00	0.00	101.13
T693	83	94BCW320	till	0.25-0.5	black	chromite	0.17	4.19	3.37	51.87	30.46	0.36	9.23	0.00	0.00	0.00	99.64
T693	84	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	43.00	0.05	0.05	54.96	0.65	0.56	0.01	0.00	0.00	99.36
T693	85	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	47.41	0.06	0.03	50.21	1.50	0.50	0.02	0.00	0.02	99.85
T693	86	94BCW320	till	0.25-0.5	black	Ilmenite	0.03	53.23	0.07	0.04	48.45	0.61	0.14	0.01	0.00	0.01	102.58
T693	87	94BCW320	till	0.25-0.5	black	chromite	0.13	0.06	12.10	59.17	16.50	0.26	12.26	0.02	0.00	0.01	100.50
T693	88	94BCW320	till	0.25-0.5	black	Ilmenite	0.17	53.00	0.08	0.00	46.74	0.64	0.65	0.03	0.00	0.01	101.31
T693	89	94BCW320	till	0.25-0.5	black	Ilm. + Hem.	0.14	14.80	0.05	0 12	78.35	0.25	0.03	0.00	0.00	0.01	93.74
T693	90	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	50.44	0.11	0.05	48.62	0.48	0.31	0.02	0.00	0.00	100.15
T693	91	94BCW320	till	0.25-0.5	black	chromite	0.13	1.97	2.70	58.92	27.31	0.46	8.89	0.01	0.02	0.01	100.42
T693	92	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	50.75	0.24	0.09	48.84	0.48	0.62	0.02	0.01	0.00	101.16
T693	93	94BCW320	till	0.25-0.5	black	Plagioclase	62.11	0.00	23.70	0.02	0.15	0.00	0.01	5.75	7.85	0.25	99.83
T693	94	94BCW320	till	0.25-0.5	black	chromite	0.14	4.44	3.40	52.21	30.29	0.40	9.06	0.01	0.00	0.00	99.95
T693	95	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	52.64	0.07	0.02	47.98	0.54	0.27	0.02	0.00	0.00	101.66
T693	96	94BCW320	till	0.25-0.5	black	chromite*	0.14	0.20	5.77	64.63	17.77	0.30	11.99	0.00	0.00	0.00	100.80
T693	97	94BCW320	till	0.25-0.5	black	chromite	0.08	0.02	25.70	42.54	16.64	0.26	14.38	0.00	0.00	0.00	99.63
T693	98	94BCW320	till	0.25-0.5	black	Ilmenite	0.13	51.65	0.03	0.05	47.11	1.58	0.15	0.02	0.00	0.00	100.71
T693	99	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	52.19	0.05	0.05	48.24	0.58	0.15	0.02	0.00	0.01	101.39
T693	100	94BCW320	till	0.25-0.5	black	Plagioclase	65.35	0.03	21.52	0.00	0.05	0.04	0.00	3.16	9.47	0.06	99.68
T693	101	94BCW320	till	0.25-0.5	black	Ilmenite	0.11	51.60	0.07	0.07	48.24	0.55	0.38	0.00	0.00	0.01	101.02
T693	102	94BCW320	till	0.25-0.5	black	chromite	0.11	3.21	1.61	56.33	29.59	0.46	8.85	0.03	0.00	0.00	100.19
T693	103	94BCW320	till	0.25-0.5	black	Ilmenite	0.66	51.73	0.10	0.03	45.94	1.18	0.12	0.77	0.01	0.02	100.56
T693	104	94BCW320	till	0.25-0.5	black	Ilmenite	0.10	52.14	0.06	0.04	47.46	0.70	0.26	0.02	0.04	0.01	100.83
T693	105	94BCW320	till	0.25-0.5	orange	almandine	37.98	0.01	20.62	0.05	28.53	0.94	1.73	10.74	0.00	0.00	100.61
T693	106	94BCW320	till	0.25-0.5	orange	almandine	37.57	0.18	20.24	0.07	27.40	2.89	2.08	9.66	0.03	0.01	100.13
T693	107	94BCW320	till	0.25-0.5	orange	almandine	37.47	0.18	20.27	0.07	28.46	1.95	2.06	9.84	0.00	0.01	100.30
T693	108	94BCW320	till	0.25-0.5	orange	almandine	38.06	0.23	20.68	0.03	26.97	2.12	4.62	7.22	0.03	0.00	99.96
T693	109	94BCW320	till	0.25-0.5	orange	almandine	37.77	0.08	20.70	0.04	24.94	2.20	2.10	12.23	0.00	0.00	100.05
T693	110	94BCW320	till	0.25-0.5	orange	almandine	37.31	0.08	20.35	0.04	29.51	3.73	1.99	7.05	0.00	0.00	100.06
T693	111	94BCW320	till	0.25-0.5	orange	almandine	37.35	0.00	20.10	0.02	29.61	0.73	2.29	9.64	0.03	0.01	99.76
T693	112	94BCW320	till	0.25-0.5	pale green	Olivine	40.46	0.02	0.00	0.06	8.78	0.12	50.02	0.03	0.00	0.00	99.50
T693	113	94BCW320	till	0.25-0.5	pale green	Olivine	40.56	0.00	0.03	0.06	8.87	0.11	50.07	0.05	0.00	0.00	99.75
T693	114	94BCW320	till	0.25-0.5	pale green	Olivine	40.50	0.10	0.03	0.04	9.38	0.13	49.45	0.04	0.00	0.01	99.68
T693	115	94BCW320	till	0.25-0.5	pale green	Olivine	40.75	0.00	0.01	0.03	8.16	0.11	50.15	0.04	0.00	0.01	99.24
T693	116	94BCW320	till	0.25-0.5	pale green	Olivine	40.55	0.06	0.06	0.06	8.71	0.12	50.30	0.05	0.00	0.01	99.91
T693	117	94BCW320	till	0.25-0.5	pale green	Olivine	40.61	0.04	0.02	0.07	8.37	0.13	50.70	0.05	0.01	0.02	100.02
T693	118	94BCW320	till	0.25-0.5	pale green	Olivine	40.08	0.05	0.03	0.04	10.23	0.16	49.19	0.02	0.00	0.01	99.81
T694	1	94BCW320	till	0.25-0.5	green	HiCr-diopsid	55.40	0.30	1.62	1.95	2.55	0.12	16.78	20.25	1.76	0.03	100.75
T694	2	94BCW320	till	0.25-0.5	green	Cr-diopside	54.88	0.20	1.32	1.45	2.38	0.09	17.71	21.70	1.19	0.05	100.96
T694	3	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.76	0.15	0.73	4.84	1.99	0.14	16.05	18.98	2.40	0.06	100.11
T694	4	94BCW320	till	0.25-0.5	green	HiCr-diopsid	55.05	0.27	1.12	2.37	2.37	0.13	16.71	21.48	1.47	0.03	101.00
T694	5	94BCW320	till	0.25-0.5	green	Cr-diopside	54.87	0.23	1.64	1.42	2.56	0.06	17.20	20.91	1.41	0.04	100.34
T694	6	94BCW320	till	0.25-0.5	green	Cr-diopside	54.19	0.17	1.64	1.35	2.50	0.09	17.43	21.10	1.36	0.03	99.84
T694	7	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.70	0.24	1.39	2.34	2.40	0.05	16.53	20.67	1.72	0.04	100.07
T694	8	94BCW320	till	0.25-0.5	green	Cr-diopside	54.37	0.22	1.51	1.23	2.69	0.09	17.59	20.85	1.21	0.06	99.80
T694	9	94BCW320	till	0.25-0.5	green	Cr-diopside	54.71	0.11	1.57	1.24	2.72	0.10	17.82	20.69	1.29	0.03	100.29

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	10	94BCW320	till	0.25-0.5	green	HiCr-diopsid	52.31	0.17	1.85	3.90	2.33	0.11	14.97	18.13	2.29	0.04	96.09
T694	11	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.80	0.17	1.07	2.50	2.36	0.13	16.53	20.77	1.71	0.03	100.06
T694	12	94BCW320	till	0.25-0.5	green	Cr-diopside	54.67	0.18	1.63	1.33	2.58	0.11	17.41	20.90	1.40	0.05	100.25
T694	13	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.71	0.17	1.64	2.23	2.46	0.12	16.59	19.61	1.90	0.01	98.42
T694	14	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.36	0.04	1.22	3.73	2.24	0.11	15.38	20.83	2.23	0.00	100.15
T694	15	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.84	0.23	1.34	2.06	2.46	0.14	16.96	20.61	1.59	0.03	100.26
T694	16	94BCW320	till	0.25-0.5	green	Cr-diopside	54.57	0.12	0.80	0.95	2.64	0.11	17.21	22.93	0.91	0.02	100.25
T694	17	94BCW320	till	0.25-0.5	green	Cr-diopside	54.98	0.23	0.86	1.26	2.44	0.08	17.33	22.44	1.05	0.03	100.70
T694	18	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.58	0.29	1.37	2.16	2.46	0.12	16.95	20.61	1.68	0.04	100.23
T694	19	94BCW320	till	0.25-0.5		*grain too small*											
T694	20	94BCW320	till	0.25-0.5	green	Cr-diopside	55.04	0.18	0.82	1.28	2.68	0.10	16.97	22.50	0.97	0.03	100.57
T694	21	94BCW320	till	0.25-0.5	green	Cr-diopside	54.10	0.09	1.11	0.56	5.31	0.21	16.65	22.50	0.26	0.01	100.80
T694	22	94BCW320	till	0.25-0.5	green	Cr-diopside	55.12	0.07	1.59	1.19	2.72	0.13	17.81	20.26	1.30	0.06	100.26
T694	23	94BCW320	till	0.25-0.5	green	Cr-diopside	55.02	0.26	1.23	1.09	2.55	0.06	17.50	21.89	1.21	0.03	100.83
T694	24	94BCW320	till	0.25-0.5	green	HiCr-diopsid	55.02	0.27	1.64	2.77	2.49	0.12	16.60	19.27	2.12	0.05	100.33
T694	25	94BCW320	till	0.25-0.5	green	HiCr-diopsid	55.07	0.24	1.77	2.91	2.26	0.09	17.00	19.23	2.06	0.05	100.67
T694	26	94BCW320	till	0.25-0.5		*plucked*											
T694	27	94BCW320	till	0.25-0.5	green	Cr-diopside	54.88	0.22	1.50	1.39	2.68	0.18	17.42	21.16	1.22	0.06	100.72
T694	28	94BCW320	till	0.25-0.5	green	Cpx+Quartz	69.25	0.23	1.30	1.43	1.92	0.09	11.90	14.65	1.13	0.03	101.93
T694	29	94BCW320	till	0.25-0.5	green	HiCr-diopsid	55.13	0.22	1.13	1.64	2.56	0.12	17.08	21.42	1.37	0.03	100.69
T694	30	94BCW320	till	0.25-0.5	green	Cr-diopside	55.20	0.04	1.25	1.41	2.60	0.10	17.98	20.74	1.12	0.06	100.50
T694	31	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.64	0.08	17.89	7.48	7.41	0.39	21.40	3.85	0.00	0.01	100.15
T694	32	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.34	16.25	8.89	6.94	0.34	19.83	6.39	0.01	0.01	100.27
T694	33	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.92	0.12	18.50	6.44	6.76	0.30	20.88	5.51	0.01	0.00	100.44
T694	34	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.48	0.07	17.60	8.04	7.03	0.43	20.92	5.00	0.00	0.01	100.57
T694	35	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.10	0.39	16.55	8.16	7.94	0.45	19.09	6.65	0.03	0.00	100.37
T694	36	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.82	0.15	20.37	4.02	7.52	0.39	20.80	4.91	0.00	0.02	99.99
T694	37	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.10	0.40	20.91	2.38	7.77	0.33	21.55	4.74	0.00	0.00	100.18
T694	38	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.15	0.00	16.98	8.80	6.87	0.45	20.38	5.41	0.00	0.01	100.04
T694	39	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.60	0.00	18.16	6.95	7.93	0.45	19.97	5.72	0.04	0.01	100.83
T694	40	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.38	0.06	17.48	8.04	7.32	0.47	20.55	5.32	0.00	0.00	100.62
T694	41	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.41	0.12	15.30	10.08	7.24	0.40	18.54	7.48	0.00	0.00	99.56
T694	42	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.02	17.73	7.67	7.72	0.42	19.68	5.92	0.00	0.01	100.45
T694	43	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.44	0.00	15.97	10.34	6.88	0.44	21.54	3.92	0.00	0.01	100.55
T694	44	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.39	0.00	17.78	8.05	7.34	0.50	21.74	3.28	0.01	0.01	100.11
T694	45	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.52	15.45	9.53	7.78	0.37	19.31	6.84	0.04	0.01	101.11
T694	46	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.68	0.05	19.03	5.66	7.23	0.47	20.43	5.47	0.01	0.02	100.05
T694	47	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.67	0.04	17.41	8.34	7.42	0.54	20.54	4.96	0.00	0.00	100.93
T694	48	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.97	0.02	16.43	9.23	7.17	0.40	19.20	6.89	0.00	0.00	100.31
T694	49	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.40	0.01	18.26	6.88	8.03	0.48	19.50	5.99	0.00	0.00	100.55
T694	50	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.11	0.23	18.25	6.17	7.71	0.34	20.47	5.57	0.02	0.00	100.84
T694	51	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.63	0.22	17.12	7.97	7.21	0.35	20.17	6.05	0.01	0.00	100.72
T694	52	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.21	0.24	16.72	8.74	7.37	0.44	19.75	5.95	0.03	0.00	100.46
T694	53	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.62	0.32	17.13	7.93	7.22	0.40	20.13	5.95	0.03	0.02	100.74
T694	54	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.05	0.06	16.76	8.87	7.11	0.44	19.27	6.90	0.01	0.01	100.47
T694	55	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.71	0.42	18.73	5.32	8.47	0.36	19.70	6.19	0.00	0.00	100.90
T694	56	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.79	0.13	17.27	8.43	7.92	0.58	18.58	6.85	0.00	0.00	100.55
T694	57	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.54	0.22	16.95	8.46	6.89	0.40	19.98	6.41	0.00	0.00	100.84
T694	58	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.74	0.00	19.30	5.44	7.77	0.47	20.30	5.50	0.00	0.01	100.52
T694	59	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.46	0.00	18.78	6.31	8.29	0.59	18.98	6.19	0.00	0.00	100.60
T694	60	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.42	0.13	16.88	8.30	7.36	0.31	19.47	6.56	0.00	0.01	100.43
T694	61	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.94	0.18	20.87	3.15	8.12	0.34	21.14	4.50	0.02	0.01	100.28

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	62	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.34	0.26	19.67	4.78	8.41	0.54	19.64	5.50	0.02	0.01	100.16
T694	63	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.28	0.41	16.93	7.86	7.91	0.42	19.28	6.18	0.03	0.02	100.31
T694	64	94BCW320	till	0.25-0.5	blue	Cr-pyrope	40.51	0.05	14.04	11.92	7.06	0.43	17.95	8.14	0.01	0.02	100.13
T694	65	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.69	0.24	19.32	5.34	8.09	0.44	19.46	5.71	0.05	0.01	100.34
T694	66	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.59	0.01	19.02	5.96	8.22	0.46	19.60	5.92	0.01	0.02	100.81
T694	67	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.02	0.05	18.86	6.44	7.34	0.51	21.52	3.86	0.00	0.01	100.60
T694	68	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.65	0.21	17.46	6.96	7.33	0.42	20.27	5.42	0.04	0.00	99.76
T694	69	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.81	0.20	15.84	9.74	7.20	0.44	19.60	6.44	0.02	0.01	100.28
T694	70	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.41	0.27	17.53	7.24	6.80	0.39	20.53	5.77	0.01	0.01	99.95
T694	71	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.70	0.00	18.31	7.04	7.88	0.51	20.44	4.78	0.01	0.03	100.69
T694	72	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.91	0.39	18.84	5.55	7.60	0.33	20.83	5.50	0.02	0.01	100.98
T694	73	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.21	0.06	16.63	9.18	7.22	0.42	19.24	6.97	0.00	0.00	100.92
T694	74	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.54	0.00	18.36	6.74	7.65	0.45	19.78	5.90	0.00	0.01	100.42
T694	75	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.61	0.00	16.39	9.27	7.20	0.42	18.81	7.20	0.03	0.00	99.92
T694	76	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.83	0.20	17.91	6.61	7.55	0.39	20.06	5.92	0.00	0.01	100.46
T694	77	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.00	0.04	19.26	5.36	7.87	0.48	19.94	5.73	0.00	0.01	100.67
T694	78	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.03	0.37	18.99	5.19	7.83	0.38	20.87	5.48	0.06	0.00	101.20
T694	79	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.44	0.04	20.15	4.21	7.79	0.45	20.56	4.94	0.01	0.01	100.58
T694	80	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.63	0.41	18.89	5.11	8.53	0.42	18.52	7.17	0.01	0.02	100.70
T694	81	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.56	0.22	17.62	7.01	7.61	0.37	20.03	5.94	0.01	0.01	100.39
T694	82	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.98	0.26	18.26	6.03	7.68	0.39	20.65	5.67	0.00	0.01	100.93
T694	83	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.14	0.28	18.43	5.88	8.72	0.39	18.37	7.26	0.00	0.00	100.48
T694	84	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.85	0.25	18.78	5.32	7.43	0.38	21.14	5.53	0.00	0.01	100.68
T694	85	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.89	0.00	16.47	9.39	7.77	0.51	18.38	7.28	0.00	0.00	100.70
T694	86	94BCW320	till	0.25-0.5	greenblue	Cr-pyrope	39.76	0.18	12.96	12.50	10.84	0.57	15.13	8.69	0.01	0.00	100.63
T694	87	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.31	0.08	17.08	8.72	7.47	0.51	19.10	6.67	0.00	0.01	100.95
T694	88	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.41	0.05	18.06	7.24	7.23	0.41	20.25	5.61	0.02	0.02	100.27
T694	89	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.92	0.21	19.39	4.40	7.38	0.36	21.11	5.03	0.03	0.00	99.82
T694	90	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.07	16.31	9.65	7.12	0.46	21.65	3.56	0.02	0.00	100.13
T694	91	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.52	0.00	18.02	7.34	7.10	0.46	21.77	3.63	0.02	0.02	99.87
T694	92	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.37	0.05	17.74	7.46	7.53	0.50	20.02	5.35	0.00	0.01	100.04
T694	93	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.40	0.34	18.40	5.70	8.52	0.42	19.03	6.62	0.00	0.02	100.45
T694	94	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.69	0.00	14.83	10.62	7.36	0.45	18.27	7.53	0.00	0.02	99.77
T694	95	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.69	0.51	18.57	5.23	8.02	0.48	19.06	6.99	0.02	0.00	100.57
T694	96	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.03	0.03	18.64	6.38	7.29	0.42	20.31	5.77	0.00	0.00	100.87
T694	97	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.66	0.07	19.02	5.94	7.11	0.43	21.35	4.74	0.01	0.01	100.34
T694	98	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.38	0.36	17.93	6.57	7.50	0.47	19.86	6.10	0.01	0.00	100.18
T694	99	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.66	0.05	17.48	8.35	6.93	0.43	21.20	4.38	0.03	0.00	100.50
T694	100	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.96	0.16	16.24	9.42	7.08	0.50	18.83	7.35	0.00	0.00	100.54
T694	101	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.63	0.30	18.92	4.85	7.93	0.39	19.98	6.20	0.02	0.01	100.24
T694	102	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.83	0.08	18.34	6.99	7.86	0.56	21.64	3.42	0.00	0.00	100.71
T694	103	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.68	0.14	18.95	5.80	9.25	0.57	18.95	5.76	0.00	0.00	101.11
T694	104	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.41	16.47	8.19	7.61	0.44	19.09	6.98	0.04	0.01	100.51
T694	105	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.41	0.63	14.70	9.99	7.69	0.39	18.80	6.96	0.01	0.01	99.60
T694	106	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.39	0.01	16.00	9.60	6.94	0.43	19.50	6.39	0.00	0.01	99.28
T694	107	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.58	0.32	18.60	5.57	7.85	0.43	20.07	6.02	0.02	0.01	100.46
T694	108	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.98	0.38	19.00	5.34	7.18	0.36	21.15	5.33	0.02	0.00	100.74
T694	109	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.67	0.08	20.34	4.11	7.95	0.35	20.87	4.86	0.00	0.01	100.24
T694	110	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.64	0.02	19.59	5.43	7.49	0.48	20.53	5.17	0.00	0.01	100.36
T694	111	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.64	0.41	19.19	4.72	8.32	0.47	18.87	6.89	0.01	0.01	100.51
T694	112	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.63	0.04	17.20	8.63	6.90	0.40	21.21	4.74	0.00	0.01	100.75
T694	113	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.57	0.43	16.99	7.94	7.17	0.44	20.15	5.84	0.04	0.00	100.57

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T694	114	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.90	0.32	19.73	4.28	7.82	0.41	21.11	4.83	0.03	0.01	100.43
T694	115	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.38	0.20	17.81	7.09	8.23	0.48	19.85	5.51	0.00	0.00	100.55
T694	116	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.85	0.24	20.52	3.48	7.53	0.43	21.59	4.68	0.01	0.00	100.33
T694	117	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.73	0.27	18.97	5.21	8.14	0.41	20.05	5.63	0.01	0.00	100.40
T694	118	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.08	0.02	17.92	6.67	6.97	0.36	20.20	5.90	0.00	0.00	100.11
T694	119	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.51	0.57	18.41	5.31	7.93	0.39	20.36	5.45	0.02	0.02	99.97
T694	120	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.39	0.00	18.78	6.18	7.99	0.50	19.67	5.65	0.00	0.02	100.18
T694	121	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.70	0.02	19.34	5.46	8.78	0.67	18.61	6.35	0.00	0.00	100.93
T694	122	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.35	0.11	17.37	8.09	7.44	0.45	19.86	5.37	0.01	0.00	100.04
T694	123	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.71	0.32	19.00	5.15	8.13	0.42	19.91	5.73	0.00	0.01	100.38
T694	124	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.97	0.04	19.02	5.89	7.28	0.41	20.68	5.32	0.02	0.01	100.63
T694	125	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.49	0.39	20.53	3.43	7.52	0.43	21.47	4.62	0.04	0.01	100.91
T694	126	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.00	0.19	17.45	7.07	7.52	0.37	19.73	5.89	0.02	0.01	100.23
T694	127	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.20	0.00	20.17	4.52	7.10	0.41	20.96	5.29	0.02	0.01	100.68
T694	128	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.37	0.11	18.56	6.74	8.18	0.52	18.95	6.05	0.01	0.00	100.50
T694	129	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.26	0.08	19.74	5.14	8.76	0.61	18.88	5.64	0.00	0.01	101.11
T694	130	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.05	0.43	19.25	4.91	8.14	0.44	19.37	6.50	0.03	0.00	101.13
T694	131	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.39	0.22	20.02	4.32	7.18	0.41	21.74	4.57	0.03	0.01	100.89
T694	132	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.10	0.02	18.33	7.16	7.06	0.44	19.78	6.17	0.00	0.00	101.06
T694	133	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.48	0.24	17.44	7.33	7.56	0.35	20.16	5.50	0.00	0.00	100.07
T694	134	94BCW320	till	0.25-0.5	red	Cr-pyrope	41.04	0.17	18.68	4.45	12.20	0.54	16.96	6.48	0.00	0.01	100.52
T694	135	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.56	0.01	17.82	7.72	7.03	0.47	19.91	6.32	0.00	0.00	100.84
T694	136	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.60	0.29	19.49	4.80	7.06	0.39	21.22	5.20	0.05	0.02	100.11
T694	137	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.28	0.21	20.66	3.57	7.52	0.38	21.44	4.62	0.02	0.00	100.69
T694	138	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.55	0.19	17.50	7.68	7.24	0.48	19.96	5.92	0.03	0.00	100.55
T694	139	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.85	0.06	20.47	3.88	8.89	0.51	19.41	5.76	0.01	0.00	100.84
T694	140	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.86	0.29	18.56	5.93	7.89	0.35	20.02	5.65	0.04	0.11	100.70
T694	141	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.68	0.52	19.24	4.80	8.25	0.54	20.19	5.44	0.07	0.00	100.73
T694	142	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.50	0.04	16.61	9.30	7.26	0.52	18.98	6.41	0.00	0.02	99.62
T694	143	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.92	0.28	17.15	7.70	7.25	0.36	20.04	5.99	0.02	0.01	99.71
T694	144	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.06	16.56	9.06	7.26	0.48	19.09	7.07	0.00	0.00	100.49
T694	145	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.58	0.35	18.97	4.21	8.34	0.44	19.42	5.33	0.02	0.02	97.68
T694	146	94BCW320	till	0.25-0.5	purple	Cr-pyrope	37.93	0.04	17.78	4.75	7.20	0.37	18.78	4.99	0.00	0.01	91.85
T694	147	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.07	17.56	8.02	7.46	0.56	21.10	3.87	0.01	0.00	99.96
T694	148	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.65	0.38	17.77	6.81	7.39	0.36	20.08	5.73	0.00	0.03	100.20
T694	149	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.47	0.25	18.50	5.54	8.29	0.41	19.57	6.20	0.02	0.01	100.26
T694	150	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.46	0.37	18.27	6.69	7.25	0.46	20.65	5.46	0.04	0.02	100.65
T694	151	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.06	0.25	15.60	9.65	7.42	0.45	19.33	6.64	0.00	0.01	100.40
T694	152	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.77	0.75	18.60	5.45	8.01	0.42	20.42	5.45	0.04	0.01	100.91
T694	153	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.93	0.18	18.86	5.23	7.52	0.32	20.78	5.36	0.03	0.01	100.20
T694	154	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.31	0.40	19.16	5.01	7.60	0.36	20.71	5.45	0.01	0.00	101.01
T694	155	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.53	0.47	18.53	4.53	7.51	0.43	20.50	4.72	0.10	0.01	98.31
T694	156	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.10	0.39	16.89	7.46	7.46	0.31	19.99	5.94	0.03	0.00	99.56
T695	1	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.26	0.03	18.07	7.93	7.24	0.50	21.56	3.58	0.01	0.00	101.16
T695	2	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.60	0.36	18.53	4.91	8.45	0.39	19.07	6.85	0.00	0.01	100.17
T695	3	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.44	0.28	16.56	8.83	7.17	0.35	19.93	6.33	0.01	0.00	100.88
T695	4	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.59	0.07	17.14	8.23	6.92	0.33	19.81	6.34	0.00	0.00	100.43
T695	5	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.62	0.34	17.36	7.87	7.53	0.42	20.17	5.85	0.06	0.00	101.21
T695	6	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	18.33	6.37	7.01	0.37	21.09	5.39	0.03	0.01	100.54
T695	7	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.18	0.08	19.84	4.62	7.14	0.29	21.42	5.07	0.00	0.02	100.66
T695	8	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.76	0.28	19.21	4.86	7.77	0.39	20.79	5.34	0.03	0.00	100.41
T695	9	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.26	0.36	17.35	7.59	7.37	0.41	20.04	5.66	0.06	0.01	100.11

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T695	10	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.63	0.29	18.35	6.11	7.11	0.37	20.70	5.66	0.00	0.01	100.24
T695	11	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.33	0.06	18.70	6.67	7.65	0.43	19.71	6.10	0.02	0.01	100.67
T695	12	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.98	0.11	18.66	6.46	7.54	0.53	19.33	6.00	0.00	0.00	100.61
T695	13	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.85	0.00	18.53	6.65	7.19	0.42	20.13	6.13	0.00	0.01	100.91
T695	14	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.19	0.17	18.91	5.75	7.09	0.38	20.96	5.17	0.03	0.01	99.67
T695	15	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.12	0.01	18.24	7.02	6.96	0.46	20.21	6.08	0.02	0.01	100.11
T695	16	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.81	0.51	15.28	9.95	6.93	0.41	19.39	6.53	0.06	0.00	99.87
T695	17	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.09	0.00	17.99	7.33	8.36	0.63	18.03	7.11	0.00	0.01	100.54
T695	18	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.74	0.21	18.16	6.79	7.31	0.39	20.49	5.57	0.00	0.01	100.67
T695	19	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.40	0.26	15.88	8.55	7.27	0.35	19.74	6.59	0.01	0.00	100.04
T695	20	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.97	0.26	18.99	5.21	7.50	0.38	20.73	5.49	0.00	0.01	100.55
T695	21	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.07	0.05	18.66	5.98	8.69	0.57	19.88	4.89	0.03	0.00	99.82
T695	22	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.31	0.10	19.74	4.27	7.56	0.39	21.10	5.13	0.00	0.00	100.59
T695	23	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.29	0.00	19.15	6.16	8.03	0.57	19.27	6.27	0.02	0.00	100.75
T695	24	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.08	0.02	20.21	4.43	7.95	0.55	20.24	5.23	0.01	0.00	100.73
T695	25	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.76	0.13	17.51	7.69	6.95	0.35	20.39	6.09	0.01	0.01	100.88
T695	26	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.78	0.05	17.92	7.68	7.55	0.48	19.76	6.18	0.00	0.00	101.41
T695	27	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.01	0.12	17.32	7.88	7.31	0.36	20.03	6.09	0.02	0.01	101.15
T695	28	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.52	0.30	18.90	5.12	8.52	0.50	19.15	6.89	0.01	0.00	100.90
T695	29	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.98	0.48	19.48	3.99	7.56	0.34	21.37	5.03	0.01	0.01	100.24
T695	30	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.45	0.32	18.72	5.33	8.43	0.39	19.31	6.13	0.00	0.00	100.09
T695	31	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.43	0.57	19.52	3.70	7.66	0.35	21.54	5.01	0.04	0.00	100.81
T695	32	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.90	0.45	20.22	3.70	7.86	0.41	21.08	4.67	0.02	0.00	100.30
T695	33	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.04	0.44	19.99	3.69	8.05	0.35	20.71	5.04	0.04	0.00	100.34
T695	34	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.10	0.20	20.34	3.34	7.79	0.36	21.29	4.86	0.03	0.01	100.32
T695	35	94BCW320	till	0.25-0.5	purple	Pyrope	42.84	0.55	21.41	1.95	7.52	0.38	21.76	4.48	0.02	0.00	100.90
T695	36	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.90	0.35	19.91	3.58	7.98	0.32	20.98	5.12	0.04	0.00	100.18
T695	37	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.72	0.47	19.01	4.36	8.46	0.38	19.52	6.40	0.00	0.02	100.34
T695	38	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.34	0.28	18.76	5.24	8.46	0.43	19.00	6.96	0.01	0.00	100.47
T695	39	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.13	0.23	20.18	3.99	7.90	0.42	21.05	4.65	0.05	0.01	100.60
T695	40	94BCW320	till	0.25-0.5	purple	almandine	38.16	0.00	21.01	0.16	31.03	0.76	7.72	1.26	0.00	0.02	100.12
T695	41	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.16	0.30	20.00	3.97	7.05	0.36	21.38	5.01	0.02	0.01	100.25
T695	42	94BCW320	till	0.25-0.5	purple	*missed grain*	17.80	0.12	8.32	0.79	1.57	0.06	8.96	1.82	0.00	0.04	39.48
T695	43	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.89	0.29	21.37	2.26	7.42	0.32	21.55	4.68	0.01	0.00	100.78
T695	44	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.86	0.42	14.57	10.62	10.12	0.60	15.97	8.19	0.03	0.00	100.37
T695	45	94BCW320	till	0.25-0.5	red	Cr-pyrope	40.40	0.24	18.41	4.86	12.16	0.53	16.70	6.68	0.01	0.00	99.99
T710	1	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.26	0.42	16.53	8.69	7.67	0.41	19.93	6.34	0.00	0.01	101.26
T710	2	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.78	0.36	20.28	3.95	7.65	0.42	21.75	4.86	0.04	0.01	102.10
T710	3	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.05	0.61	17.61	6.82	7.81	0.48	18.70	8.07	0.02	0.02	101.18
T710	4	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.97	0.21	16.04	9.50	7.16	0.50	20.14	5.80	0.05	0.01	100.38
T710	5	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.81	0.33	19.66	4.30	7.77	0.36	20.84	5.03	0.01	0.02	100.13
T710	6	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.50	0.21	16.72	8.40	7.13	0.41	20.28	6.21	0.02	0.00	100.88
T710	7	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.46	0.14	18.27	7.23	7.09	0.43	20.38	5.54	0.00	0.00	100.54
T710	8	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.24	0.02	18.51	6.85	7.36	0.41	20.53	5.48	0.00	0.00	100.40
T710	9	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.74	0.13	17.49	8.13	7.11	0.43	19.66	6.42	0.01	0.01	100.15
T710	10	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.79	0.30	18.94	5.35	7.76	0.39	21.07	5.27	0.02	0.01	99.89
T710	11	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.80	0.07	16.86	8.63	7.12	0.43	19.41	6.75	0.00	0.02	100.09
T710	12	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.69	0.07	18.02	7.32	7.22	0.45	20.16	6.01	0.02	0.01	99.96
T710	13	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.97	0.17	19.03	5.63	7.19	0.45	21.41	5.04	0.03	0.01	99.93
T710	14	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.77	0.00	17.72	7.98	7.29	0.57	20.38	5.39	0.00	0.00	100.09
T710	15	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.96	0.55	19.57	4.19	7.69	0.30	21.41	5.09	0.02	0.01	99.80
T710	16	94BCW320	till	0.5-0.84	purple	Cr-pyrope	32.89	0.29	11.67	5.77	5.44	0.24	15.83	1.49	0.38	4.40	78.39

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T710	17	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.10	0.45	19.18	4.97	8.51	0.40	19.35	6.85	0.03	0.00	100.83
T710	18	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.04	0.13	19.80	4.39	7.93	0.37	20.70	5.25	0.02	0.00	100.63
T710	19	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.82	0.06	18.54	6.80	7.39	0.47	20.25	5.65	0.00	0.03	100.00
T710	20	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.99	0.07	19.70	5.22	8.42	0.46	20.20	5.58	0.01	0.01	101.66
T710	21	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.36	0.16	17.64	7.69	7.73	0.38	20.01	6.05	0.04	0.01	100.09
T710	22	94BCW320	till	0.5-0.84	purple	Cr-pyrope	43.73	0.06	19.44	6.69	7.48	0.44	21.65	4.42	0.03	0.11	104.04
T710	23	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.86	0.20	17.40	8.07	7.27	0.45	20.85	5.56	0.06	0.00	101.72
T710	24	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.46	0.15	19.50	5.56	7.39	0.44	21.40	5.32	0.00	0.00	101.21
T710	25	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.74	0.11	18.86	5.71	7.44	0.38	21.16	5.63	0.02	0.01	101.04
T710	26	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.38	0.04	20.29	4.84	7.49	0.47	21.69	5.02	0.01	0.00	102.22
T710	27	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.23	0.19	20.39	3.56	8.06	0.34	20.71	5.46	0.01	0.02	100.95
T710	28	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.25	0.03	18.34	7.47	7.36	0.45	21.18	5.00	0.02	0.02	101.11
T710	29	94BCW320	till	0.5-0.84	orange	almandine	39.28	0.22	21.70	0.04	20.88	0.43	8.44	9.93	0.04	0.01	100.97
T710	30	94BCW320	till	0.5-0.84	orange	almandine	37.18	0.03	20.69	0.07	29.04	3.20	2.01	7.95	0.00	0.02	100.17
T710	31	94BCW320	till	0.5-0.84	black	tourmaline	36.09	0.78	32.78	0.01	12.37	0.25	3.41	0.46	1.90	0.06	88.11
T710	32	94BCW320	till	0.5-0.84	black	chromite*	0.12	0.26	7.59	63.80	17.44	0.37	11.73	0.01	0.00	0.00	101.31
T710	33	94BCW320	till	0.5-0.84	black	chromite	0.14	0.01	16.62	53.90	17.64	0.32	11.56	0.04	0.03	0.00	100.27
T710	34	94BCW320	till	0.5-0.84	black	chromite	0.10	0.03	18.14	53.11	14.96	0.30	12.93	0.02	0.02	0.01	99.62
T710	35	94BCW320	till	0.5-0.84	black	chromite*	0.14	2.88	2.79	61.26	21.84	0.48	11.19	0.01	0.02	0.00	100.61
T710	36	94BCW320	till	0.5-0.84	black	FeTi-oxide	0.05	35.81	0.10	0.08	59.37	1.39	0.55	0.01	0.02	0.01	97.39
T710	37	94BCW320	till	0.5-0.84	pl green	enstatite	57.81	0.03	0.51	0.29	5.26	0.12	35.56	0.65	0.08	0.01	100.33
T710	38	94BCW320	till	0.5-0.84	pl green	enstatite	57.28	0.03	0.52	0.35	4.56	0.12	36.89	0.29	0.07	0.00	100.10
T710	39	94BCW320	till	0.5-0.84	pl green	enstatite	58.11	0.08	0.49	0.45	4.66	0.17	36.69	0.40	0.17	0.01	101.22
T710	40	94BCW320	till	0.5-0.84	pl green	enstatite	57.85	0.04	0.41	0.27	4.42	0.12	36.34	0.21	0.01	0.00	99.66
T710	41	94BCW320	till	0.5-0.84	pl green	olivine	40.32	0.00	0.03	0.06	8.68	0.15	51.22	0.04	0.02	0.00	100.52
T710	42	94BCW320	till	0.5-0.84	pl green	enstatite	57.82	0.07	0.59	0.30	4.42	0.08	36.44	0.55	0.13	0.00	100.39
T710	43	94BCW320	till	0.5-0.84	pl green	enstatite	57.00	0.06	0.48	0.32	4.29	0.15	36.56	0.36	0.02	0.00	99.23
T710	44	94BCW320	till	0.5-0.84	pl green	enstatite	56.62	0.03	1.48	0.49	4.35	0.17	36.27	0.41	0.00	0.00	99.82
T710	45	94BCW320	till	0.5-0.84	pl green	enstatite	56.78	0.02	0.59	0.24	5.75	0.13	34.52	0.76	0.08	0.00	98.88
T710	46	94BCW320	till	0.5-0.84	pl green	enstatite	57.70	0.05	0.54	0.47	4.59	0.09	36.17	0.49	0.12	0.02	100.24
T710	47	94BCW320	till	0.5-0.84	pl green	olivine	39.93	0.06	0.00	0.03	8.52	0.16	50.62	0.04	0.01	0.00	99.38
T710	48	94BCW320	till	0.5-0.84	pl green	olivine	40.74	0.06	0.02	0.04	9.25	0.13	50.44	0.06	0.00	0.02	100.75
T710	49	94BCW320	till	0.5-0.84	pl green	olivine	41.15	0.07	0.03	0.05	9.35	0.12	50.13	0.02	0.00	0.00	100.92
T710	50	94BCW320	till	0.5-0.84	pl green	olivine	40.35	0.00	0.02	0.07	8.86	0.13	50.74	0.05	0.01	0.00	100.22
T710	51	94BCW320	till	0.5-0.84	pl green	olivine	41.11	0.03	0.01	0.04	7.31	0.10	52.20	0.04	0.00	0.02	100.85
T710	52	94BCW320	till	0.5-0.84	pl green	olivine	40.44	0.00	0.01	0.04	8.67	0.14	50.53	0.02	0.00	0.01	99.87
T710	53	94BCW320	till	0.5-0.84	green	Cr-diopside	53.40	0.11	1.44	1.26	2.71	0.11	17.96	20.88	1.14	0.03	99.03
T710	54	94BCW320	till	0.5-0.84	green	Cr-diopside	54.86	0.05	1.25	1.19	2.67	0.14	18.59	20.40	1.07	0.07	100.26
T710	55	94BCW320	till	0.5-0.84	green	Cr-diopside	53.72	0.16	1.68	1.43	2.68	0.13	17.85	20.44	1.45	0.03	99.57
T710	56	94BCW320	till	0.5-0.84	green	Cr-diopside	55.15	0.04	1.30	0.98	2.46	0.10	17.82	21.70	0.97	0.05	100.57
T710	57	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.36	0.25	0.95	1.89	2.40	0.11	17.10	21.95	1.21	0.07	100.26
T710	58	94BCW320	till	0.5-0.84	green	Cr-diopside	54.53	0.09	1.37	1.19	2.70	0.06	18.10	20.81	1.08	0.10	100.03
T710	59	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.01	0.22	1.79	2.05	2.93	0.10	16.73	19.27	1.89	0.01	98.99
T710	60	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.49	0.29	1.42	2.98	2.31	0.07	16.90	20.27	1.82	0.07	100.61
T710	61	94BCW320	till	0.5-0.84	green	Cr-diopside	55.12	0.03	1.35	0.93	2.74	0.15	18.77	20.52	1.04	0.06	100.69
T710	62	94BCW320	till	0.5-0.84	green	Cr-diopside	54.75	0.16	1.41	1.23	2.41	0.10	17.76	21.36	1.38	0.02	100.59
T710	63	94BCW320	till	0.5-0.84	green	Cr-diopside	55.10	0.17	1.64	1.36	2.54	0.11	17.83	20.52	1.38	0.03	100.68
T710	64	94BCW320	till	0.5-0.84	green	Cr-diopside	54.04	0.18	1.35	1.13	2.62	0.08	17.84	21.39	1.10	0.07	99.81
T710	65	94BCW320	till	0.5-0.84	green	Cr-diopside	55.16	0.04	1.30	1.29	3.48	0.17	17.32	20.12	1.31	0.04	100.21
T710	66	94BCW320	till	0.5-0.84	green	Cr-diopside	54.72	0.20	1.64	1.43	2.50	0.12	17.22	20.43	1.41	0.05	99.71
T710	67	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.23	0.26	1.43	1.91	2.54	0.10	17.15	20.44	1.68	0.03	100.76
T710	68	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.73	0.19	1.63	1.53	2.60	0.06	17.63	20.89	1.43	0.06	99.75

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T710	69	94BCW320	till	0.5-0.84	green	Cr-diopside	54.74	0.23	1.59	1.33	2.55	0.08	18.12	20.20	1.38	0.05	100.28
T710	70	94BCW320	till	0.5-0.84	green	Cr-diopside	53.94	0.08	1.52	0.60	2.73	0.13	18.16	21.04	1.03	0.05	99.27
T710	71	94BCW320	till	0.5-0.84	green	Cr-diopside	53.98	0.24	1.45	1.20	2.62	0.08	17.23	21.63	1.11	0.07	99.62
T710	72	94BCW320	till	0.5-0.84	green	Cr-diopside	55.36	0.08	1.39	1.32	2.64	0.05	17.70	21.05	1.16	0.05	100.79
T710	73	94BCW320	till	0.5-0.84	green	Cr-diopside	54.45	0.16	1.64	1.28	2.68	0.09	17.67	20.40	1.38	0.02	99.76
T710	74	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.30	0.23	1.39	2.04	2.52	0.10	17.14	20.14	1.70	0.02	99.57
T710	75	94BCW320	till	0.5-0.84	green	Cr-diopside	53.78	0.18	1.53	1.24	2.52	0.12	17.77	20.51	1.32	0.07	99.05
T710	76	94BCW320	till	0.5-0.84	green	Cr-diopside	54.62	0.33	1.39	1.26	2.70	0.09	17.86	20.90	1.17	0.05	100.37
T710	77	94BCW320	till	0.5-0.84	green	Cr-diopside	53.72	0.16	1.60	1.29	2.70	0.06	17.85	20.63	1.30	0.05	99.36
T710	78	94BCW320	till	0.5-0.84	green	Cr-diopside	54.38	0.05	1.31	1.20	2.81	0.06	18.36	20.77	1.02	0.07	100.04
T710	79	94BCW320	till	0.5-0.84	green	Cr-diopside	53.90	0.08	1.46	1.39	3.12	0.13	17.06	21.29	1.42	0.03	99.87
T710	80	94BCW320	till	0.5-0.84	green	Cr-diopside	54.61	0.14	1.56	1.26	2.71	0.11	17.76	20.38	1.28	0.03	99.83
T710	81	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.12	0.23	1.57	1.61	2.66	0.12	17.12	20.36	1.63	0.01	99.45
T710	82	94BCW320	till	0.5-0.84	green	Cr-diopside	54.16	0.12	1.37	1.18	2.58	0.05	17.58	20.98	1.11	0.08	99.21
T710	83	94BCW320	till	0.5-0.84	green	Cr-diopside	54.17	0.12	1.49	1.04	2.57	0.11	18.23	20.72	1.19	0.06	99.68
T710	84	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.58	0.18	1.81	2.00	2.75	0.07	17.03	19.44	1.93	0.03	100.82
T710	85	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.12	0.23	1.34	3.70	2.23	0.08	17.08	18.64	2.21	0.06	100.69
T710	86	94BCW320	till	0.5-0.84	green	Cr-diopside	52.82	0.23	1.17	1.01	2.67	0.09	17.71	21.33	1.14	0.09	98.24
T710	87	94BCW320	till	0.5-0.84	green	Cr-diopside	54.68	0.32	1.62	1.19	2.82	0.13	17.49	20.61	1.56	0.04	100.47
T710	88	94BCW320	till	0.5-0.84	green	Cr-diopside	54.86	0.05	1.40	1.01	2.82	0.10	18.12	21.04	1.15	0.07	100.61
T710	89	94BCW320	till	0.5-0.84	green	Cr-diopside	54.68	0.11	1.36	1.15	2.65	0.14	18.51	20.44	1.07	0.06	100.16
T710	90	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.17	0.30	1.74	1.98	2.71	0.13	17.04	19.85	1.89	0.03	100.84
T710	91	94BCW320	till	0.5-0.84	green	Cr-diopside	55.93	0.23	1.62	1.48	2.50	0.07	17.88	20.00	1.44	0.07	101.21
T710	92	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.40	0.25	1.27	1.79	2.42	0.09	17.23	20.68	1.49	0.05	99.65
T710	93	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.58	0.31	1.55	2.35	2.58	0.08	16.82	19.97	1.74	0.05	100.01
T710	94	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.80	0.20	1.23	1.67	2.46	0.08	17.32	21.63	1.28	0.05	100.72
T710	95	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.12	0.21	1.21	1.96	2.37	0.09	17.24	20.79	1.54	0.04	99.57
T710	96	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.25	0.06	0.43	2.46	2.22	0.09	16.95	21.72	1.43	0.01	99.62
T710	97	94BCW320	till	0.5-0.84	green	Cr-diopside	55.11	0.13	1.39	1.24	2.58	0.11	18.03	20.81	1.08	0.07	100.55
T710	98	94BCW320	till	0.5-0.84	green	Cr-diopside	55.35	0.27	1.67	0.93	2.67	0.09	17.62	20.92	1.24	0.05	100.80
T710	99	94BCW320	till	0.5-0.84	green	Cr-diopside	55.16	0.18	1.41	1.12	2.69	0.09	18.08	20.62	1.05	0.04	100.43
T710	100	94BCW320	till	0.5-0.84	green	Cr-diopside	54.44	0.27	1.64	1.29	2.69	0.13	17.86	20.14	1.39	0.05	99.89
T710	101	94BCW320	till	0.5-0.84	green	Cr-diopside	54.07	0.25	1.38	1.05	2.84	0.15	17.55	21.15	1.16	0.07	99.66
T710	102	94BCW320	till	0.5-0.84	green	Cr-diopside	54.36	0.18	1.53	1.28	2.69	0.12	17.74	20.50	1.27	0.05	99.74
T710	103	94BCW320	till	0.5-0.84	green	Cr-diopside	54.01	0.07	1.12	1.16	2.60	0.12	18.21	21.47	0.94	0.05	99.75
T710	104	94BCW320	till	0.5-0.84	green	Cr-diopside	53.75	0.16	1.57	1.27	2.63	0.07	17.74	20.46	1.29	0.05	98.98
T710	105	94BCW320	till	0.5-0.84	green	Cr-diopside	54.48	0.10	1.33	1.18	2.62	0.05	18.05	21.40	1.06	0.05	100.32
T710	106	94BCW320	till	0.5-0.84	green	Cr-diopside	54.42	0.13	1.62	1.38	2.52	0.05	17.31	21.06	1.37	0.06	99.89
T710	107	94BCW320	till	0.5-0.84	green	tz+Cr-diopsi	64.72	0.17	2.07	1.15	2.34	0.12	22.09	16.88	1.72	0.06	111.32
T710	108	94BCW320	till	0.5-0.84	green	Cr-diopside	53.81	0.32	1.81	0.64	3.46	0.11	17.44	20.65	1.41	0.02	99.67
T710	109	94BCW320	till	0.5-0.84	green	Cr-diopside	54.06	0.23	1.01	1.38	2.32	0.13	17.45	21.61	1.18	0.04	99.40
T710	110	94BCW320	till	0.5-0.84	green	Cr-diopside	53.57	0.10	1.35	1.24	2.46	0.11	18.20	21.19	1.05	0.05	99.33
T710	111	94BCW320	till	0.5-0.84	green	Cr-diopside	54.03	0.14	1.46	1.26	2.67	0.12	17.70	20.86	1.18	0.06	99.48
T710	112	94BCW320	till	0.5-0.84	green	Cr-diopside	53.92	0.25	1.93	1.23	2.81	0.11	17.68	19.56	1.73	0.03	99.25
T710	113	94BCW320	till	0.5-0.84	green	Cr-diopside	54.75	0.21	1.41	0.88	2.50	0.08	17.69	20.96	1.24	0.04	99.77
T710	114	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.25	0.27	2.26	2.90	2.73	0.10	16.57	18.48	2.44	0.04	100.02
T710	115	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.16	0.09	1.40	3.28	2.30	0.14	16.87	19.20	2.12	0.02	99.57
T710	116	94BCW320	till	0.5-0.84	green	Cr-diopside	54.63	0.15	1.57	1.26	2.60	0.10	17.97	20.28	1.33	0.05	99.94
T710	117	94BCW320	till	0.5-0.84	green	Cr-diopside	49.21	0.12	1.71	0.98	2.84	0.11	16.93	17.66	1.08	0.08	90.72
T710	118	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.00	0.42	1.62	1.75	2.73	0.14	17.00	20.18	1.69	0.05	100.57
T710	119	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.08	0.14	0.20	2.00	1.88	0.11	17.08	22.29	1.15	0.01	98.93
T710	121	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.39	0.24	1.41	2.01	2.60	0.08	16.59	20.55	1.63	0.05	99.53

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T710	122	94BCW320	till	0.5-0.84	green	Cr-diopside	54.19	0.15	1.55	1.24	2.66	0.13	17.82	20.24	1.26	0.05	99.29
T710	123	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.61	0.15	2.37	1.75	2.62	0.11	17.05	19.48	2.07	0.04	100.25
T710	124	94BCW320	till	0.5-0.84	green	Cr-diopside	54.43	0.07	1.32	0.90	2.74	0.09	18.22	20.62	1.04	0.05	99.47
T710	125	94BCW320	till	0.5-0.84	green	Cr-diopside	53.53	0.11	1.59	1.19	3.03	0.13	17.83	19.23	0.93	0.05	97.63
T710	126	94BCW320	till	0.5-0.84	green	Cr-diopside	53.93	0.24	1.40	1.04	2.82	0.11	17.65	20.68	1.10	0.06	99.04
T710	127	94BCW320	till	0.5-0.84	green	enstatite	56.39	0.19	0.99	0.96	5.51	0.12	34.60	0.73	0.17	0.01	99.65
T710	128	94BCW320	till	0.5-0.84	green	Cr-diopside	54.76	0.32	1.84	0.91	3.10	0.13	17.44	19.71	1.50	0.06	99.76
T710	129	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.11	0.07	1.90	3.66	2.16	0.12	16.53	18.30	2.45	0.01	98.32
T710	130	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.68	0.05	1.35	3.72	2.12	0.08	16.57	18.75	2.24	0.03	99.60
T710	131	94BCW320	till	0.5-0.84	green	Cr-diopside	53.94	0.23	1.35	1.20	2.64	0.09	18.08	20.69	1.11	0.05	99.36
T710	132	94BCW320	till	0.5-0.84	green	Cr-diopside	53.48	0.14	1.77	1.34	2.75	0.06	17.12	19.66	1.31	0.09	97.72
T710	133	94BCW320	till	0.5-0.84	green	Cr-diopside	54.08	0.09	0.94	1.46	2.48	0.08	17.58	21.63	1.09	0.05	99.48
T710	134	94BCW320	till	0.5-0.84	green	Cr-diopside	55.11	0.22	0.75	0.69	2.64	0.09	17.73	22.95	0.83	0.02	101.01
T710	135	94BCW320	till	0.5-0.84	bl-green	alcite/apatit	0.10	0.00	0.01	0.00	0.24	0.77	0.04	53.37	0.13	0.02	54.69
T711	78	94BCW320	till	0.5-0.84	purple	pyrope	41.56	0.15	21.96	1.88	8.38	0.40	21.99	4.20	0.01	0.01	100.52
T711	79	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.66	0.19	19.81	4.35	7.63	0.35	21.16	5.14	0.04	0.00	100.33
T711	80	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.73	0.58	20.07	3.60	7.72	0.39	21.44	5.00	0.02	0.01	100.54
T711	81	94BCW320	till	0.5-0.84	purple	pyrope	42.26	0.18	21.94	1.96	8.44	0.41	21.54	4.24	0.02	0.00	101.01
T711	82	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.35	0.23	18.64	5.79	7.56	0.37	20.43	5.55	0.01	0.00	99.91
T711	83	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.45	0.01	19.56	5.41	7.75	0.50	20.19	5.57	0.00	0.02	100.46
T711	84	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.09	0.04	16.68	9.58	7.02	0.43	19.72	6.62	0.00	0.00	100.18
T711	85	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.59	0.07	16.72	9.13	7.07	0.43	20.12	5.87	0.03	0.00	100.01
T711	86	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.60	0.06	19.70	5.52	8.23	0.61	20.10	5.53	0.00	0.01	101.37
T711	87	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.23	0.03	18.52	7.40	7.42	0.46	19.85	5.88	0.00	0.00	100.78
T711	88	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.34	0.01	18.05	7.37	8.02	0.51	19.53	6.04	0.00	0.00	100.87
T711	89	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.06	0.05	17.39	8.38	7.09	0.43	20.01	6.13	0.03	0.00	100.56
T711	90	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.65	0.06	18.47	7.09	7.33	0.38	20.10	6.07	0.00	0.00	100.14
T711	91	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.18	0.04	17.05	8.54	7.18	0.46	19.70	6.62	0.02	0.01	100.79
T711	92	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.81	0.00	18.13	7.22	7.79	0.54	19.51	5.98	0.01	0.01	100.00
T711	93	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.54	0.00	17.72	8.51	7.52	0.53	21.58	3.70	0.03	0.00	101.13
T711	94	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.40	0.21	15.33	10.05	7.41	0.45	18.97	7.34	0.00	0.02	100.16
T711	95	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.80	0.04	20.00	4.99	7.49	0.41	21.71	4.79	0.00	0.01	101.24
T711	96	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.52	0.01	18.74	6.43	7.64	0.41	20.41	5.92	0.00	0.00	101.09
T711	97	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.04	0.07	19.04	5.42	8.48	0.52	19.49	5.47	0.00	0.24	99.77
T711	98	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.30	0.13	16.80	8.73	7.31	0.47	19.48	6.22	0.01	0.00	99.46
T711	99	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.71	0.11	16.15	9.71	7.38	0.51	19.18	7.31	0.02	0.01	101.07
T711	100	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.22	0.16	19.22	5.49	7.15	0.40	21.51	5.00	0.04	0.01	100.21
T711	101	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.24	0.20	19.41	5.39	7.21	0.47	21.40	4.88	0.02	0.01	100.22
T711	102	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.88	0.38	20.69	3.72	7.90	0.34	21.34	4.55	0.04	0.02	99.86
T711	103	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.49	0.08	18.32	7.01	7.21	0.45	20.03	5.77	0.01	0.03	100.40
T711	104	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.82	0.00	16.49	9.07	7.18	0.43	19.73	6.81	0.02	0.00	100.54
T711	105	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.98	0.04	17.75	8.23	7.31	0.49	20.59	5.00	0.00	0.02	100.41
T711	106	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.20	0.09	18.42	7.10	7.10	0.45	20.92	5.80	0.00	0.00	101.09
T711	107	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.57	0.00	19.63	5.55	7.36	0.44	22.59	2.97	0.00	0.01	100.13
T672	128	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.97	0.12	20.38	4.22	7.41	0.27	21.34	5.24	0.00	0.02	100.97
T672	129	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.39	0.17	18.48	7.00	7.44	0.37	20.51	5.41	0.06	0.00	100.83
T672	130	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.11	0.32	18.50	6.39	7.26	0.43	20.40	5.56	0.03	0.00	99.99
T672	131	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.34	0.35	17.01	8.24	7.31	0.42	19.22	6.41	0.03	0.00	100.33
T672	132	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.24	0.25	18.74	6.17	6.90	0.31	20.63	5.44	0.00	0.01	99.70
T672	133	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.86	0.21	17.75	7.70	6.71	0.41	20.47	6.06	0.00	0.01	101.18
T672	134	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.24	19.94	4.91	7.41	0.41	21.30	4.91	0.02	0.00	100.44
T672	135	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.89	0.26	19.07	5.88	7.38	0.44	20.96	5.08	0.04	0.00	100.01

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T672	136	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.93	0.00	16.89	9.66	6.94	0.42	20.92	4.80	0.01	0.02	100.58
T672	137	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.20	0.01	17.44	8.28	6.79	0.40	20.21	5.71	0.00	0.00	100.03
T672	138	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.08	18.52	7.08	7.11	0.44	20.36	5.76	0.04	0.00	100.30
T672	139	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.73	0.05	19.12	6.17	7.83	0.45	19.28	6.04	0.00	0.00	99.67
T672	140	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.02	0.37	18.53	6.04	7.42	0.35	19.93	5.89	0.00	0.01	99.55
T672	141	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.16	0.02	18.04	7.36	6.96	0.41	19.58	6.36	0.00	0.01	99.90
T672	142	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.62	0.02	19.47	5.76	7.42	0.42	20.20	5.66	0.00	0.01	100.57
T672	143	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.17	0.03	20.38	4.97	6.76	0.41	22.97	2.58	0.02	0.01	100.30
T672	144	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.33	0.16	17.26	8.53	6.86	0.35	19.93	6.36	0.02	0.00	100.78
T672	145	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.09	0.03	18.05	8.02	6.67	0.41	19.85	6.23	0.03	0.00	100.37
T672	146	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.57	0.33	19.32	5.36	6.89	0.39	20.84	5.43	0.02	0.00	100.14
T672	147	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.29	0.09	19.20	5.94	6.91	0.35	20.55	5.49	0.03	0.02	99.87
T672	148	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.36	0.23	18.49	6.38	7.18	0.36	20.29	5.63	0.00	0.00	99.93
T672	149	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.70	0.34	18.82	6.40	6.43	0.33	21.29	5.34	0.03	0.00	100.67
T672	150	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.19	0.03	18.98	6.44	7.33	0.39	19.68	5.95	0.00	0.00	99.99
T672	151	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.49	0.16	20.88	3.96	8.25	0.43	20.87	4.69	0.00	0.00	100.72
T672	152	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.50	0.00	17.03	8.91	6.53	0.43	19.67	6.73	0.00	0.02	99.80
T672	153	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.81	0.51	18.92	6.02	7.08	0.36	20.70	5.49	0.05	0.00	100.93
T672	154	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.39	19.09	5.32	8.09	0.40	19.14	6.54	0.04	0.01	100.32
T672	155	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.96	0.02	17.34	8.81	6.87	0.43	20.47	5.49	0.01	0.00	100.39
T672	156	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.96	0.02	19.13	6.17	6.78	0.40	20.44	5.39	0.00	0.00	99.29
T672	157	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.48	0.07	16.24	9.45	6.89	0.45	18.73	7.33	0.00	0.00	99.64
T672	158	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.03	0.30	19.13	5.66	7.34	0.40	20.61	5.08	0.04	0.01	99.60
T672	159	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.98	0.37	21.33	2.72	7.36	0.35	21.55	4.71	0.04	0.01	100.41
T672	160	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.88	0.06	17.65	8.24	7.45	0.51	20.95	4.16	0.00	0.00	99.89
T672	161	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.88	0.35	19.85	4.58	7.76	0.39	20.92	5.07	0.03	0.00	99.83
T672	162	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.11	0.29	20.56	4.32	7.57	0.46	20.91	4.89	0.04	0.01	101.17
T672	163	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.09	0.37	19.40	4.76	8.53	0.37	18.62	7.35	0.01	0.00	100.50
T672	164	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.55	0.07	17.34	8.43	7.10	0.40	19.88	6.28	0.03	0.02	100.09
T673	1	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.38	0.29	17.02	8.80	7.41	0.33	19.73	6.81	0.03	0.00	101.81
T673	2	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.08	0.06	20.25	5.91	7.21	0.38	20.34	6.28	0.01	0.01	102.51
T673	3	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.77	0.33	19.02	6.23	7.09	0.36	20.84	5.67	0.08	0.01	101.39
T673	4	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.31	0.00	18.45	7.25	7.78	0.47	19.17	6.19	0.00	0.01	100.63
T673	5	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.08	18.07	7.79	6.93	0.39	19.57	6.40	0.02	0.01	100.54
T673	6	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.20	0.22	17.13	8.62	6.15	0.32	20.89	5.85	0.03	0.01	100.40
T673	7	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.42	0.35	19.51	4.64	7.59	0.38	20.46	5.29	0.05	0.02	99.70
T673	8	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.54	0.68	19.16	5.29	7.45	0.37	21.17	5.70	0.05	0.02	101.41
T673	9	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.07	0.36	20.21	4.66	7.93	0.40	20.02	6.12	0.04	0.02	100.83
T673	10	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.14	0.30	19.78	4.99	7.68	0.36	20.89	5.49	0.04	0.01	100.67
T673	11	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.99	0.35	18.98	5.57	8.05	0.43	19.42	6.29	0.06	0.01	100.13
T673	12	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.81	0.38	17.78	7.00	7.66	0.37	20.20	5.92	0.00	0.01	100.13
T673	13	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.78	0.07	19.36	5.72	7.59	0.38	20.18	5.40	0.01	0.02	99.51
T673	14	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.97	0.51	18.88	6.04	7.15	0.34	20.92	5.81	0.04	0.01	100.66
T673	15	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.37	0.01	20.88	4.29	7.87	0.59	20.02	5.68	0.02	0.00	100.74
T673	16	94BCW320	till	0.25-0.5	black	ilmenite	0.01	50.34	0.04	0.07	48.07	0.50	0.52	0.01	0.07	0.00	99.62
T673	17	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.44	0.06	0.02	46.29	1.64	0.09	0.01	0.05	0.00	99.60
T673	18	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.95	0.05	0.00	49.52	0.70	1.06	0.02	0.02	0.01	99.32
T673	19	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.66	7.29	0.31	0.00	81.35	0.16	0.03	0.11	0.02	0.01	89.93
T673	20	94BCW320	till	0.25-0.5	black	ilmenite	0.01	51.95	0.05	0.02	47.21	1.08	0.10	0.01	0.00	0.00	100.42
T673	21	94BCW320	till	0.25-0.5	black	chromite	0.24	2.37	4.07	58.97	23.07	0.42	10.95	0.03	0.04	0.02	100.18
T673	22	94BCW320	till	0.25-0.5	black	ilmenite	0.07	46.72	0.08	0.00	49.06	0.87	1.37	0.01	0.04	0.02	98.24
T673	23	94BCW320	till	0.25-0.5	black	ilmenite	0.05	51.54	0.07	0.00	47.55	0.22	0.36	0.03	0.05	0.01	99.87

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	24	94BCW320	till	0.25-0.5	black	ilmenite	0.12	50.80	0.09	0.05	47.86	0.55	0.58	0.00	0.00	0.00	100.04
T673	25	94BCW320	till	0.25-0.5	black	ilmenite	0.07	51.89	0.06	0.11	46.40	0.39	0.65	0.01	0.00	0.00	99.58
T673	26	94BCW320	till	0.25-0.5	black	magnetite	0.14	0.05	0.10	0.06	93.16	0.07	0.01	0.00	0.00	0.00	93.59
T673	27	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.69	0.04	0.00	47.01	0.67	0.11	0.01	0.12	0.01	98.65
T673	28	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.08	31.28	0.11	0.04	62.73	2.02	0.16	0.01	0.02	0.01	96.47
T673	29	94BCW320	till	0.25-0.5	grey	hematite	2.17	0.14	0.21	0.16	81.91	0.10	0.11	1.43	0.02	0.05	86.30
T673	30	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.95	0.05	0.07	45.72	0.24	1.18	0.01	0.11	0.02	99.35
T673	31	94BCW320	till	0.25-0.5	black	rutile	0.00	97.16	0.09	0.16	0.37	0.00	0.02	0.02	0.00	0.01	97.83
T673	32	94BCW320	till	0.25-0.5	black	ilmenite	0.09	51.07	0.03	0.04	46.14	1.76	0.13	0.04	0.00	0.01	99.31
T673	33	94BCW320	till	0.25-0.5	black	ilmenite	0.01	51.18	0.04	0.01	47.00	1.36	0.02	0.03	0.00	0.01	99.67
T673	34	94BCW320	till	0.25-0.5	black	ilmenite	0.03	49.25	0.06	0.13	48.46	0.29	1.26	0.03	0.00	0.01	99.51
T673	35	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.56	0.06	0.01	48.56	1.34	0.10	0.00	0.00	0.00	98.64
T673	36	94BCW320	till	0.25-0.5	green	Cr-diopside	54.06	0.18	0.88	1.33	2.21	0.10	17.69	22.77	1.21	0.05	100.46
T673	37	94BCW320	till	0.25-0.5	green	Cr-diopside	54.27	0.13	1.67	1.32	2.53	0.12	18.00	20.98	1.58	0.23	100.83
T673	38	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.97	0.04	1.54	2.34	1.78	0.12	17.19	21.14	1.79	0.00	99.91
T673	39	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.25	0.27	1.43	2.41	2.47	0.13	16.70	20.68	1.96	0.04	100.32
T673	40	94BCW320	till	0.25-0.5	green	Cr-diopside	53.86	0.12	1.61	1.27	2.61	0.09	18.04	20.88	1.43	0.05	99.96
T673	41	94BCW320	till	0.25-0.5	green	Cr-diopside	54.07	0.23	1.48	1.01	2.46	0.08	17.64	21.88	1.26	0.04	100.14
T673	42	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.67	0.14	0.57	2.25	1.89	0.10	17.03	23.05	1.48	0.03	101.20
T673	43	94BCW320	till	0.25-0.5	green	Cr-diopside	54.55	0.23	0.90	1.22	2.37	0.13	17.88	22.74	1.10	0.03	101.14
T712	1	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.18	0.00	18.64	6.55	8.24	0.63	19.30	6.00	0.00	0.00	100.56
T712	2	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.11	0.00	17.73	7.33	7.48	0.49	19.55	5.64	0.00	0.00	99.32
T712	3	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.68	0.24	16.20	8.80	7.18	0.42	19.58	6.19	0.00	0.01	99.28
T712	4	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.91	0.32	18.94	4.92	8.62	0.44	19.04	6.75	0.00	0.01	99.95
T712	5	94BCW320	till	0.5-0.84	purple	pyrope	41.93	0.19	21.65	1.94	7.81	0.39	21.28	4.14	0.01	0.02	99.36
T712	6	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.86	0.44	20.00	3.70	7.38	0.37	21.11	5.01	0.03	0.00	99.92
T712	7	94BCW320	till	0.5-0.84	orange	almandine	36.95	0.08	20.66	0.02	25.92	2.40	2.32	10.72	0.00	0.00	99.07
T712	8	94BCW320	till	0.5-0.84	orange	almandine	37.20	0.06	20.69	0.06	29.64	2.00	4.09	5.86	0.00	0.00	99.60
T712	9	94BCW320	till	0.5-0.84	orange	almandine	37.65	0.09	21.25	0.02	29.17	0.70	7.25	3.83	0.00	0.01	99.97
T712	10	94BCW320	till	0.5-0.84	black	FeTi-oxide	2.83	17.95	0.47	0.05	70.03	0.69	0.26	0.04	0.00	0.03	92.35
T712	11	94BCW320	till	0.5-0.84	green	Cr-diopside	54.10	0.06	1.26	1.03	2.59	0.11	18.33	20.41	1.00	0.06	98.95
T712	12	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.17	0.24	2.06	2.11	2.86	0.17	16.28	18.94	2.07	0.02	99.92
T712	13	94BCW320	till	0.5-0.84	green	Cr-diopside	54.54	0.19	0.88	1.28	2.42	0.12	17.16	21.66	1.04	0.03	99.31
T712	14	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.40	0.23	1.59	1.62	2.63	0.15	17.86	19.43	1.61	0.03	99.54
T712	15	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.85	0.14	0.79	1.52	2.26	0.14	16.79	21.97	1.08	0.04	100.58
T712	16	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.07	0.03	2.33	1.99	2.09	0.10	16.11	20.00	2.17	0.01	99.90
T712	17	94BCW320	till	0.5-0.84	green	Cr-diopside	52.71	0.08	1.33	1.17	2.67	0.10	18.48	19.69	1.12	0.04	97.39
T712	18	94BCW320	till	0.5-0.84	green	Cr-diopside	54.46	0.14	1.30	1.03	2.65	0.08	18.09	20.68	0.98	0.08	99.48
T712	19	94BCW320	till	0.5-0.84	green	Cr-diopside	53.66	0.16	1.46	1.12	2.60	0.10	17.61	20.60	1.10	0.04	98.43
T712	20	94BCW320	till	0.5-0.84	green	Cr-diopside	54.10	0.25	1.24	1.10	2.45	0.09	17.40	21.39	1.05	0.05	99.11
T673	44	94BCW320	till	0.25-0.5	black	ilmenite	0.02	50.43	0.09	0.08	48.44	0.59	0.15	0.02	0.00	0.00	99.80
T673	45	94BCW320	till	0.25-0.5	black	chromite	0.16	2.94	2.14	57.14	25.37	0.44	9.47	0.03	0.09	0.01	97.78
T673	46	94BCW320	till	0.25-0.5	black	ilmenite	0.04	49.49	0.06	0.00	49.20	0.70	0.24	0.03	0.01	0.01	99.77
T673	47	94BCW320	till	0.25-0.5	black	ilmenite	0.02	51.94	0.03	0.02	47.14	0.49	0.35	0.01	0.00	0.01	100.01
T673	48	94BCW320	till	0.25-0.5	black	ilmenite	0.10	47.65	0.06	0.06	49.96	0.29	0.56	0.02	0.04	0.01	98.75
T673	49	94BCW320	till	0.25-0.5	black	ilmenite	0.09	49.75	0.06	0.00	48.74	1.03	0.54	0.03	0.00	0.01	100.24
T673	50	94BCW320	till	0.25-0.5	black	ilmenite	0.07	49.22	0.03	0.02	46.14	3.29	0.09	0.02	0.05	0.00	98.91
T673	51	94BCW320	till	0.25-0.5	black	ilmenite	0.03	51.78	0.03	0.00	45.93	1.01	0.08	0.00	0.01	0.00	98.88
T673	52	94BCW320	till	0.25-0.5	black	ilmenite	0.00	52.53	0.00	0.00	47.20	0.46	0.14	0.02	0.00	0.01	100.36
T673	53	94BCW320	till	0.25-0.5	black	Ti-Fe-oxide	0.00	61.41	0.05	0.05	35.69	0.03	0.01	0.02	0.00	0.03	97.28
T673	54	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.58	0.03	0.00	45.95	2.32	0.12	0.00	0.00	0.02	100.00
T673	55	94BCW320	till	0.25-0.5	black	magnetite	0.17	0.04	0.03	0.35	93.24	0.10	0.02	0.01	0.00	0.03	93.99

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	56	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.98	0.05	0.02	46.88	0.28	0.08	0.00	0.00	0.00	99.29
T673	57	94BCW320	till	0.25-0.5	black	chromite	0.15	4.47	5.57	44.34	34.39	0.42	9.56	0.00	0.00	0.00	98.89
T673	58	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.05	13.49	0.22	0.09	78.11	0.12	0.20	0.00	0.00	0.03	92.30
T673	59	94BCW320	till	0.25-0.5	black	chromite	0.14	4.23	3.69	50.79	30.19	0.37	9.57	0.01	0.02	0.02	99.03
T673	60	94BCW320	till	0.25-0.5	black	hematite	0.43	0.15	0.16	0.00	89.05	0.12	0.00	0.01	0.00	0.01	89.93
T673	61	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.55	0.06	0.00	48.13	0.50	0.23	0.01	0.00	0.02	99.49
T673	62	94BCW320	till	0.25-0.5	black	ilmenite	0.01	50.15	0.05	0.00	46.96	2.08	0.45	0.02	0.00	0.00	99.71
T673	63	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.01	0.06	0.00	47.58	0.48	0.54	0.02	0.01	0.01	99.70
T673	64	94BCW320	till	0.25-0.5	black	chromite	0.19	2.58	1.94	55.37	29.74	0.45	8.60	0.01	0.02	0.02	98.92
T673	65	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.51	0.09	0.05	47.84	0.44	0.49	0.00	0.00	0.01	99.43
T673	66	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.05	0.05	0.00	48.67	0.48	0.23	0.03	0.00	0.00	99.51
T673	67	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.79	0.06	0.02	48.44	0.57	0.18	0.03	0.00	0.00	100.10
T673	68	94BCW320	till	0.25-0.5	black	amphibole?	39.66	1.46	13.00	0.02	23.60	0.20	5.49	11.47	1.45	1.64	97.98
T673	69	94BCW320	till	0.25-0.5	bla ck	biotite	35.58	2.90	16.07	0.00	20.36	0.14	11.58	0.02	0.04	9.68	96.35
T673	70	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.78	0.05	0.04	48.61	0.40	0.32	0.01	0.00	0.01	100.21
T673	71	94BCW320	till	0.25-0.5	black	ilmenite	0.07	48.09	0.04	0.01	48.50	1.99	0.20	0.02	0.05	0.00	98.97
T673	72	94BCW320	till	0.25-0.5	black	chromite	0.17	4.11	4.29	51.42	28.98	0.40	10.21	0.00	0.00	0.00	99.58
T673	73	94BCW320	till	0.25-0.5	black	magnetite	0.15	0.04	0.09	0.08	93.02	0.10	0.02	0.01	0.00	0.00	93.50
T673	74	94BCW320	till	0.25-0.5	black	ilmenite	0.01	50.24	0.06	0.04	47.58	0.53	0.60	0.01	0.01	0.02	99.10
T673	75	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.13	0.05	0.09	50.26	0.31	0.53	0.00	0.00	0.00	99.37
T673	76	94BCW320	till	0.25-0.5	black	ilmenite	0.09	47.98	0.03	0.03	49.01	0.60	1.41	0.00	0.00	0.01	99.16
T673	77	94BCW320	till	0.25-0.5	black	ilmenite	0.06	47.73	0.08	0.04	50.33	0.37	0.64	0.01	0.00	0.00	99.24
T673	78	94BCW320	till	0.25-0.5	black	ilmenite	0.02	50.32	0.05	0.00	48.19	1.07	0.07	0.00	0.01	0.03	99.75
T673	79	94BCW320	till	0.25-0.5	black	Mg-ilmenite	0.00	50.93	0.40	5.60	29.76	0.32	12.60	0.03	0.01	0.00	99.65
T673	80	94BCW320	till	0.25-0.5	black	ilmenite	0.00	48.06	0.09	0.04	48.95	1.21	1.16	0.01	0.01	0.00	99.51
T673	81	94BCW320	till	0.25-0.5	black	leucoxene	26.61	39.24	0.40	0.00	31.15	0.64	0.03	0.06	0.02	0.02	98.17
T673	82	94BCW320	till	0.25-0.5	black	hematite ?	2.66	0.00	0.05	0.00	76.71	0.09	0.64	0.08	0.01	0.00	80.25
T673	83	94BCW320	till	0.25-0.5	black	ilmenite	0.06	46.35	0.07	0.03	50.76	1.00	0.74	0.00	0.01	0.00	99.02
T673	84	94BCW320	till	0.25-0.5	black	Cr-spinel	0.13	0.04	54.73	12.20	12.02	0.11	19.20	0.02	0.00	0.02	98.46
T673	85	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.41	0.05	0.02	48.22	0.68	0.12	0.00	0.00	0.00	99.50
T673	86	94BCW320	till	0.25-0.5	black	chromite	0.09	2.14	3.15	58.96	24.45	0.37	10.00	0.01	0.00	0.00	99.17
T673	87	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.93	0.08	0.01	47.66	0.42	0.63	0.01	0.00	0.01	99.75
T673	88	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.33	0.08	0.00	48.24	0.54	0.40	0.03	0.00	0.02	99.63
T673	89	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.41	0.06	0.00	48.11	1.55	0.10	0.01	0.01	0.00	100.24
T673	90	94BCW320	till	0.25-0.5	black	ilmenite	0.01	48.00	0.05	0.02	49.53	0.94	0.47	0.03	0.01	0.00	99.06
T673	91	94BCW320	till	0.25-0.5	black	ilmenite	0.00	46.78	0.04	0.12	49.22	2.15	0.18	0.03	0.00	0.00	98.51
T673	92	94BCW320	till	0.25-0.5	black	Mg-ilmenite	0.00	50.81	0.37	5.55	29.50	0.28	12.35	0.01	0.01	0.01	98.88
T673	93	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.48	0.06	0.00	49.82	1.92	0.07	0.03	0.00	0.00	99.36
T673	94	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.97	0.01	19.23	6.75	7.31	0.47	23.39	1.69	0.00	0.02	99.84
T673	95	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.84	0.04	18.86	6.81	6.92	0.38	20.37	5.95	0.01	0.01	100.18
T673	96	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.86	0.05	18.30	7.40	7.17	0.38	19.74	6.36	0.00	0.02	100.27
T673	97	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.99	0.20	17.92	7.75	6.99	0.39	20.60	5.78	0.03	0.02	100.66
T673	98	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.71	0.02	19.37	6.62	7.74	0.41	20.15	5.90	0.02	0.01	101.95
T673	99	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.05	0.30	18.06	7.53	7.35	0.47	20.00	5.85	0.04	0.01	100.65
T673	100	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.39	0.43	14.79	10.83	7.38	0.40	18.77	7.63	0.03	0.00	100.66
T673	101	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.33	0.03	18.74	7.16	8.44	0.47	18.76	6.57	0.00	0.01	101.51
T673	102	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.62	0.02	17.83	7.89	7.19	0.43	19.53	6.88	0.00	0.00	100.39
T673	103	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.01	0.12	18.79	6.61	7.38	0.35	20.51	5.93	0.02	0.00	101.71
T673	104	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.34	0.32	17.56	8.17	7.29	0.40	20.23	6.06	0.00	0.00	101.37
T673	105	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.07	0.31	19.11	5.91	7.65	0.42	20.59	5.32	0.02	0.00	100.40
T673	106	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.09	0.32	18.05	7.33	7.14	0.38	20.50	6.00	0.00	0.00	100.81
T673	107	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.42	0.04	17.10	8.74	8.99	0.57	18.16	6.66	0.00	0.00	100.67

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	108	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.99	0.07	18.61	7.25	7.62	0.56	19.77	5.98	0.00	0.03	100.89
T673	109	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.42	0.10	17.59	8.28	7.12	0.47	19.36	6.81	0.00	0.00	100.14
T673	110	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.78	0.10	18.14	7.40	8.29	0.59	18.67	6.48	0.03	0.03	100.51
T673	111	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.46	0.07	18.21	7.55	7.83	0.52	19.39	5.87	0.00	0.01	99.91
T673	112	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.37	0.13	16.83	9.01	7.15	0.40	19.55	6.46	0.00	0.01	99.91
T673	113	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.90	0.02	19.51	6.03	7.83	0.49	21.10	4.69	0.00	0.01	100.57
T673	114	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.31	0.06	18.53	6.81	7.45	0.49	19.60	5.91	0.02	0.01	99.20
T673	115	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.83	0.07	17.64	7.86	7.23	0.47	19.78	5.88	0.02	0.00	99.78
T673	116	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.60	0.05	21.28	3.73	7.25	0.42	21.53	4.86	0.01	0.01	100.74
T673	117	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.21	20.28	4.50	7.21	0.40	20.98	4.97	0.01	0.01	99.84
T673	118	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.61	0.06	18.98	6.31	6.90	0.42	20.36	5.82	0.00	0.00	99.45
T673	119	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.03	18.97	6.59	7.04	0.46	20.46	5.02	0.00	0.00	99.47
T673	120	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.02	0.36	17.91	7.52	6.49	0.29	20.77	5.75	0.02	0.01	100.14
T673	121	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.61	0.27	19.75	5.35	7.14	0.37	21.17	5.42	0.00	0.00	101.07
T673	122	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.51	0.00	20.24	5.14	7.29	0.40	20.89	4.81	0.00	0.01	100.28
T673	123	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.23	0.43	17.63	6.93	8.06	0.41	18.80	7.07	0.06	0.03	99.64
T673	124	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.89	0.01	18.86	6.70	7.03	0.40	20.03	6.04	0.00	0.00	99.96
T673	125	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.35	0.08	21.14	4.53	7.23	0.39	21.52	5.13	0.00	0.00	102.36
T673	126	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.63	0.19	16.97	8.61	7.53	0.36	19.84	6.58	0.04	0.00	100.74
T673	127	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.92	0.27	18.26	7.11	8.38	0.43	19.73	5.96	0.02	0.01	101.09
T673	128	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.65	0.05	16.65	9.54	7.12	0.48	19.64	6.39	0.02	0.00	100.54
T673	129	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.82	0.41	19.39	5.60	7.66	0.39	21.66	5.63	0.01	0.03	102.59
T673	130	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.58	0.28	19.74	5.75	7.47	0.37	21.03	5.21	0.05	0.01	101.50
T673	131	94BCW320	till	0.25-0.5	purple	Cr-pyrope	43.07	0.03	20.62	6.20	8.21	0.51	20.05	6.60	0.00	0.00	105.28
T673	132	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.77	0.03	16.82	9.42	7.07	0.46	21.36	4.04	0.02	0.01	99.99
T673	133	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.11	0.13	19.78	5.61	7.34	0.38	21.60	5.17	0.01	0.01	101.13
T673	134	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.67	0.51	19.91	4.77	8.36	0.43	20.69	4.90	0.06	0.00	101.30
T673	135	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.63	0.04	19.09	6.32	7.85	0.57	19.55	6.03	0.00	0.00	100.07
T673	136	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.66	0.25	20.72	3.42	7.40	0.34	20.81	4.59	0.06	0.01	98.25
T673	137	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.28	0.07	18.60	6.59	7.42	0.47	20.06	5.97	0.04	0.01	99.51
T673	138	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.56	0.50	18.85	5.45	7.68	0.46	18.77	7.55	0.03	0.01	99.87
T673	139	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.75	0.34	18.84	5.91	7.31	0.37	20.24	6.24	0.00	0.01	100.00
T673	140	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.40	0.27	17.45	7.45	7.50	0.40	19.63	6.34	0.01	0.03	99.48
T673	141	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.75	0.20	19.79	4.88	8.28	0.42	20.32	5.14	0.06	0.01	99.84
T673	142	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.77	0.18	18.30	7.41	7.45	0.40	20.73	5.60	0.01	0.01	101.86
T673	143	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.67	0.43	19.53	4.52	8.39	0.47	19.20	6.43	0.04	0.01	99.69
T673	144	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.26	0.37	17.80	6.98	7.88	0.39	18.51	7.11	0.03	0.00	99.32
T673	145	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.86	0.36	19.75	4.46	7.73	0.40	20.70	5.20	0.03	0.00	99.49
T673	146	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.73	0.49	19.99	4.26	6.83	0.40	21.14	5.04	0.05	0.01	98.95
T673	147	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.04	0.28	21.00	3.03	7.81	0.38	20.95	4.86	0.02	0.01	99.37
T673	148	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.38	19.41	5.21	7.59	0.40	20.42	5.28	0.04	0.01	99.65
T673	149	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.02	0.37	19.83	4.24	7.72	0.32	20.60	5.27	0.02	0.02	99.41
T673	150	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.87	0.48	19.81	4.30	8.50	0.36	19.62	5.98	0.01	0.00	99.93
T673	151	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.43	0.56	19.17	5.29	7.61	0.42	20.66	5.15	0.06	0.01	99.34
T673	152	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.87	0.35	19.55	4.74	8.54	0.37	18.59	7.20	0.02	0.02	100.25
T673	153	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.57	0.47	19.98	4.35	8.47	0.41	19.64	6.21	0.00	0.01	101.09
T673	154	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.65	0.36	19.41	4.80	8.50	0.42	19.02	6.87	0.03	0.00	100.05
T673	155	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.65	0.50	20.64	4.00	7.68	0.41	20.83	5.41	0.06	0.00	101.17
T673	156	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.98	0.57	19.33	5.04	7.87	0.42	18.99	7.22	0.07	0.00	100.49
T673	157	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.56	0.39	20.21	4.64	7.27	0.33	21.57	5.10	0.02	0.02	101.10
T673	158	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.19	0.65	17.89	5.33	8.37	0.41	18.75	5.83	0.06	0.00	96.47
T673	159	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.35	0.24	21.67	2.59	8.04	0.37	21.13	4.36	0.02	0.00	99.76

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T673	160	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.54	0.38	19.33	4.74	8.35	0.40	18.40	7.23	0.01	0.00	99.38
T673	161	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.64	0.02	16.90	8.81	6.92	0.44	19.47	5.99	0.01	0.01	98.21
T673	162	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.97	0.48	17.11	7.29	8.49	0.44	17.41	8.02	0.02	0.00	99.23
T673	163	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.16	0.44	17.84	7.15	7.55	0.33	20.21	5.91	0.04	0.00	99.61
T673	164	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.35	0.12	16.97	8.76	6.46	0.38	20.30	6.08	0.02	0.00	99.43
T673	165	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.88	0.03	18.67	6.74	7.89	0.41	19.87	5.68	0.00	0.00	100.17
T673	166	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.94	0.03	18.14	8.04	7.15	0.48	22.34	2.58	0.00	0.01	99.71
T674	1	94BCW320	till	0.25-0.5	green	Cr-diopside	52.42	0.21	1.03	1.08	2.36	0.07	17.12	22.16	1.02	0.17	97.65
T674	2	94BCW320	till	0.25-0.5	green	Cr-diopside	53.69	0.20	1.18	1.48	2.58	0.11	17.31	21.75	1.25	0.03	99.58
T674	3	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.04	0.25	1.39	1.80	2.44	0.09	17.14	21.09	1.62	0.03	99.89
T674	4	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.72	0.25	1.50	2.75	2.38	0.12	16.81	19.57	2.17	0.04	99.30
T674	5	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.97	0.24	1.22	1.65	2.30	0.10	17.26	21.47	1.52	0.04	99.78
T674	6	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.11	0.24	1.22	1.52	2.27	0.04	17.08	21.23	1.46	0.02	98.18
T674	7	94BCW320	till	0.25-0.5	green	Cr-diopside	53.72	0.22	1.05	1.18	2.31	0.08	17.32	22.58	1.08	0.04	99.59
T674	8	94BCW320	till	0.25-0.5	green	diopside	52.89	0.07	1.03	0.35	4.77	0.22	16.62	23.13	0.42	0.00	99.50
T674	9	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.01	0.21	1.66	1.56	2.50	0.10	17.38	20.86	1.56	0.06	99.88
T674	10	94BCW320	till	0.25-0.5	green	diopside	52.57	0.08	1.40	0 02	4.69	0.14	15.61	24.38	0.50	0.00	99.39
T674	11	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.77	0.12	0.76	3.07	2.25	0.14	16.53	21.19	1.73	0.04	99.57
T674	12	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.78	0.21	1.48	2.94	2.19	0.11	16.56	20.71	1.82	0.06	99.86
T674	13	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.46	0.25	1.55	1.57	2.86	0.11	17.23	20.99	1.54	0.05	99.61
T674	14	94BCW320	till	0.25-0.5	pl green	Cr-diopside	52.67	0.07	3.32	1.26	1.46	0.08	16.50	22.79	1.12	0.00	99.28
T674	15	94BCW320	till	0.25-0.5	pl green	diopside	53.08	0.05	0.81	0.01	4.57	0.24	16.03	24.97	0.40	0.01	100.16
T674	16	94BCW320	till	0.25-0.5	pl green	Cr-diopside	53.93	0.13	1.81	1.00	4.41	0.22	17.19	22.01	0.72	0.02	101.45
T674	17	94BCW320	till	0.25-0.5	pl green	diopside	53.22	0.05	1.09	0.07	6.56	0.31	15.00	23.95	0.56	0.01	100.80
T674	18	94BCW320	till	0.25-0.5	pl green	olivine	40.37	0.02	0.03	0.03	7.68	0.11	51.24	0.05	0.00	0.00	99.53
T674	19	94BCW320	till	0.25-0.5	pl green	olivine	40.04	0.04	0.03	0.04	9.42	0.12	49.88	0.06	0.00	0.01	99.65
T674	20	94BCW320	till	0.25-0.5	pl green	olivine	40.21	0.04	0.02	0.03	7.95	0.15	51.01	0.04	0.00	0.00	99.44
T674	21	94BCW320	till	0.25-0.5	pl green	olivine	40.07	0.01	0.04	0.04	8.74	0.13	50.49	0.05	0.01	0.00	99.57
T674	22	94BCW320	till	0.25-0.5	pl green	olivine	40.18	0.02	0.00	0.04	7.82	0.12	51.01	0.03	0.00	0.01	99.23
T674	23	94BCW320	till	0.25-0.5	pl green	olivine	39.86	0.01	0.02	0.00	8.99	0.11	50.09	0.06	0.00	0.01	99.14
T674	24	94BCW320	till	0.25-0.5	pl green	grossular	39.95	0.08	22.65	0.01	1.03	0.31	0.10	37.10	0.00	0.00	101.22
T674	25	94BCW320	till	0.25-0.5	pl green	olivine	39.93	0.02	0.02	0.06	7.90	0.06	50.86	0.03	0.00	0.02	98.89
T674	26	94BCW320	till	0.25-0.5	orange	almandine	36.58	0.02	20.99	0.01	35.72	4.28	2.58	0.68	0.04	0.00	100.90
T674	27	94BCW320	till	0.25-0.5	orange	almandine	37.66	0.07	21.48	0.00	25.79	1.75	2.05	12.17	0.00	0.03	100.99
T674	28	94BCW320	till	0.25-0.5	orange	almandine	38.06	0.06	21.66	0.02	26.25	1.18	2.62	11.85	0.00	0.00	101.69
T674	29	94BCW320	till	0.25-0.5	orange	almandine	38.02	0.07	21.48	0.05	22.98	1.40	2.06	14.74	0.00	0.00	100.79
T674	30	94BCW320	till	0.25-0.5	orange	almandine	36.67	0.05	21.32	0.00	32.62	4.08	3.71	2.24	0.00	0.00	100.69
T674	31	94BCW320	till	0.25-0.5	orange	almandine	38.15	0.02	21.52	0.03	29.22	1.64	4.79	6.06	0.00	0.01	101.44
T674	32	94BCW320	till	0.25-0.5	orange	almandine	37.29	0.09	20.89	0.00	24.38	2.59	0.96	14.24	0.00	0.01	100.44
T712	21	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.25	0.00	19.31	5.58	7.30	0.37	20.01	5.74	0.00	0.00	99.57
T712	22	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.02	0.08	16.85	8.95	7.07	0.39	19.09	6.68	0.01	0.00	100.16
T712	23	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.50	0.08	19.63	5.27	7.11	0.43	21.11	5.08	0.00	0.01	100.22
T712	24	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.86	0.04	19.17	5.57	7.75	0.45	20.18	5.35	0.00	0.00	100.35
T712	25	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.22	0.20	19.21	5.30	7.07	0.37	20.99	4.87	0.01	0.00	100.26
T712	26	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.74	0.20	19.54	4.65	7.75	0.35	21.00	5.03	0.00	0.02	100.29
T712	27	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.67	0.00	18.19	7.03	7.92	0.59	18.94	6.07	0.00	0.00	99.41
T712	28	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.18	0.30	19.03	5.47	7.52	0.48	20.78	4.99	0.02	0.00	99.77
T712	29	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.87	0.29	19.36	4.80	7.14	0.43	21.34	5.04	0.04	0.00	99.31
T712	30	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.47	0.00	16.51	9.08	7.13	0.40	19.15	6.79	0.00	0.00	99.53
T712	31	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.09	0.14	20.35	3.76	7.88	0.41	21.60	4.46	0.02	0.01	100.70
T712	32	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.72	0.14	16.44	9.36	6.65	0.41	20.96	4.96	0.00	0.01	99.64
T712	33	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.44	0.02	18.23	7.44	7.39	0.53	21.52	4.06	0.02	0.01	100.66

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T712	34	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.84	0.00	16.90	8.82	8.13	0.58	18.18	6.80	0.01	0.01	100.28
T712	35	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.05	0.28	19.70	4.32	7.86	0.36	21.35	4.90	0.01	0.02	100.85
T712	36	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.29	0.39	18.56	5.60	8.31	0.38	19.41	6.21	0.00	0.01	100.15
T712	37	94BCW320	till	0.5-0.84	ilky purpl	almandine	38.33	0.00	21.51	0.05	29.91	0.46	9.12	1.03	0.00	0.01	100.42
T712	38	94BCW320	till	0.5-0.84	orange	almandine	38.31	0.14	20.81	0.07	22.16	1.36	2.87	13.96	0.00	0.00	99.68
T712	39	94BCW320	till	0.5-0.84	orange	almandine	37.73	0.11	20.57	0.03	26.55	2.71	2.97	9.11	0.00	0.01	99.77
T712	40	94BCW320	till	0.5-0.84	orange	almandine	37.10	0.06	20.77	0.05	29.40	2.10	5.30	4.36	0.00	0.00	99.14
T712	41	94BCW320	till	0.5-0.84	pl green	enstatite	57.02	0.00	0.53	0.36	5.14	0.17	35.07	0.75	0.10	0.01	99.15
T712	42	94BCW320	till	0.5-0.84	pl green	enstatite	56.24	0.02	1.76	0.52	4.43	0.15	34.26	0.98	0.03	0.10	98.49
T712	43	94BCW320	till	0.5-0.84	pl green	olivine	40.28	0.00	0.02	0.06	8.16	0.15	49.50	0.05	0.00	0.00	98.22
T712	44	94BCW320	till	0.5-0.84	pl green	olivine	39.77	0.04	0.02	0.04	8.68	0.15	49.12	0.04	0.00	0.01	97.88
T712	45	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.70	0.23	1.42	1.53	2.43	0.07	16.11	20.04	1.23	0.06	96.80
T712	46	94BCW320	till	0.5-0.84	green	Cr-diopside	54.19	0.15	1.46	1.20	2.52	0.08	17.49	20.44	1.17	0.08	98.78
T712	47	94BCW320	till	0.5-0.84	green	Cr-diopside	54.24	0.21	1.40	1.24	2.56	0.09	17.05	20.96	1.21	0.03	99.00
T712	48	94BCW320	till	0.5-0.84	green	Cr-diopside	53.49	0.03	1.48	1.16	2.63	0.05	17.63	20.59	1.17	0.04	98.27
T712	49	94BCW320	till	0.5-0.84	green	HiCr-diopsid	55.11	0.10	0.69	1.95	1.69	0.04	17.53	21.76	1.18	0.03	100.08
T712	50	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.64	0.18	1.60	1.56	2.66	0.11	17.77	19.27	1.41	0.05	98.26
T712	51	94BCW320	till	0.5-0.84	green	Cr-diopside	53.16	0.20	1.51	1.10	2.73	0.12	17.63	20.42	1.24	0.05	98.16
T712	52	94BCW320	till	0.5-0.84	green	Cr-diopside	54.34	0.13	1.64	1.37	2.54	0.08	17.34	20.48	1.33	0.04	99.29
T712	53	94BCW320	till	0.5-0.84	green	Cr-diopside	54.09	0.16	1.89	1.41	2.67	0.11	16.45	19.28	1.29	0.05	97.39
T712	54	94BCW320	till	0.5-0.84	green	Cr-diopside	54.27	0.09	1.23	1.10	2.84	0.12	17.75	20.85	1.00	0.06	99.30
T712	55	94BCW320	till	0.5-0.84	green	diopside	54.03	0.06	0.85	0.38	2.27	0.08	18.48	22.48	0.53	0.01	99.17
T712	56	94BCW320	till	0.5-0.84	green	Cr-diopside	54.54	0.19	1.46	1.29	2.71	0.10	17.44	20.83	1.26	0.06	99.88
T712	57	94BCW320	till	0.5-0.84	green	Cr-diopside	53.62	0.14	1.47	1.36	2.69	0.10	17.55	20.37	1.22	0.08	98.61
T712	58	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.71	0.09	2.13	2.31	2.80	0.15	16.56	18.14	2.23	0.03	98.15
T712	59	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.84	0.09	1.59	1.61	2.64	0.06	17.22	20.08	1.38	0.04	99.54
T712	60	94BCW320	till	0.5-0.84	green	Cr-diopside	53.83	0.08	1.22	1.02	2.82	0.12	18.12	20.91	0.94	0.06	99.09
T712	61	94BCW320	till	0.5-0.84	green	Cr-diopside	53.41	0.15	1.43	1.13	2.51	0.10	17.10	21.45	1.18	0.02	98.48
T712	62	94BCW320	till	0.5-0.84	green	Cr-diopside	53.69	0.14	1.36	1.12	2.56	0.08	18.01	20.54	1.09	0.07	98.65
T712	63	94BCW320	till	0.5-0.84	green	Cr-diopside	53.85	0.11	1.41	1.23	2.62	0.10	17.81	20.56	1.17	0.07	98.92
T674	33	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.16	0.38	17.69	7.64	7.33	0.37	20.26	6.22	0.05	0.01	101.11
T674	34	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.11	0.40	18.27	7.08	7.05	0.36	20.09	5.97	0.00	0.00	100.34
T674	35	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.49	0.51	18.78	5.90	8.29	0.39	18.86	7.31	0.05	0.01	100.58
T674	36	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.71	0.52	18.98	5.48	8.48	0.45	18.43	7.29	0.06	0.02	100.41
T674	37	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.52	0.23	17.99	7.42	7.59	0.42	20.28	6.14	0.03	0.00	101.62
T674	38	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.82	0.46	19.27	5.05	8.02	0.44	18.97	7.00	0.02	0.01	100.06
T674	39	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.65	0.38	19.82	4.64	8.58	0.37	18.96	7.10	0.00	0.01	100.50
T674	40	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.93	0.25	18.00	6.87	7.43	0.38	20.10	6.08	0.01	0.00	100.06
T674	41	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.33	0.31	20.51	4.31	8.02	0.49	20.95	4.76	0.07	0.01	100.76
T674	42	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.38	0.69	17.13	7.33	8.98	0.50	18.37	6.76	0.06	0.02	100.21
T674	43	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.53	0.09	20.01	5.11	7.50	0.34	20.80	5.19	0.02	0.01	100.60
T674	44	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.55	0.36	19.37	5.08	8.28	0.39	19.38	6.46	0.02	0.00	100.89
T674	45	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.99	0.39	19.44	4.69	8.69	0.40	18.62	7.13	0.00	0.01	100.36
T674	46	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.76	0.18	21.24	2.88	7.79	0.35	21.30	4.86	0.04	0.00	100.39
T674	47	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.61	0.44	20.49	4.01	7.25	0.41	21.17	4.90	0.03	0.00	100.30
T674	48	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.53	0.34	19.14	4.74	8.79	0.42	18.32	7.35	0.00	0.01	99.63
T674	49	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.01	0.01	17.13	9.12	6.76	0.42	20.45	5.47	0.02	0.00	100.39
T674	50	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.24	0.25	19.22	5.42	7.67	0.35	19.94	6.09	0.01	0.01	100.19
T674	51	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.72	0.49	18.46	6.25	7.80	0.37	20.07	6.00	0.03	0.02	100.21
T674	52	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.21	0.34	18.42	6.14	7.64	0.33	20.24	5.88	0.00	0.02	100.20
T674	53	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.21	0.09	18.23	7.82	7.23	0.45	19.35	6.57	0.01	0.00	100.95
T674	54	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.77	0.28	17.55	7.49	7.49	0.42	19.78	6.38	0.02	0.01	100.17

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	55	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.23	0.39	19.84	4.76	8.04	0.39	20.22	6.10	0.04	0.00	101.01
T674	56	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.17	0.29	17.27	8.38	6.88	0.42	20.16	6.00	0.02	0.02	100.60
T674	57	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.70	0.28	17.35	7.74	6.56	0.33	20.18	6.14	0.02	0.01	99.31
T674	58	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.10	0.00	19.63	5.69	8.47	0.49	19.13	6.08	0.00	0.01	100.60
T674	59	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.28	0.37	18.98	5.67	7.61	0.32	20.88	5.59	0.02	0.02	100.74
T674	60	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.24	0.42	19.51	4.97	8.23	0.42	19.62	6.38	0.01	0.00	100.78
T674	61	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.16	0.15	19.36	5.33	7.80	0.43	20.74	5.48	0.03	0.00	100.48
T674	62	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.82	0.39	18.79	5.43	7.98	0.35	20.08	6.04	0.01	0.02	99.90
T674	63	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.66	0.36	17.57	7.37	7.91	0.43	19.64	6.19	0.06	0.00	100.19
T674	64	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.51	0.00	18.17	7.46	7.85	0.48	18.65	6.75	0.02	0.01	99.90
T674	65	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.65	0.17	18.34	6.55	7.63	0.36	19.71	6.34	0.00	0.02	99.77
T674	66	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.83	0.05	18.65	7.23	7.25	0.42	19.85	6.30	0.02	0.00	100.59
T674	67	94BCW320	till	0.25-0.5	purple	*plucked*											
T674	68	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.85	0.25	19.53	5.33	7.56	0.47	21.07	4.98	0.03	0.00	100.07
T674	69	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.76	0.12	18.95	6.24	8.51	0.54	19.83	5.27	0.05	0.00	100.25
T674	70	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.70	0.21	21.16	3.51	7.55	0.43	21.47	4.72	0.02	0.00	100.78
T674	71	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.50	0.31	19.36	6.00	6.71	0.36	20.98	5.43	0.06	0.02	100.74
T674	72	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.39	0.97	16.20	8.02	7.50	0.36	19.67	6.72	0.05	0.00	99.87
T674	73	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.49	0.37	20.61	3.63	7.93	0.41	21.05	5.21	0.01	0.01	100.72
T674	74	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.86	0.36	21.48	2.42	7.83	0.30	21.41	4.68	0.03	0.01	100.39
T674	75	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.81	0.01	19.40	6.46	7.09	0.45	21.79	3.87	0.01	0.02	100.90
T674	76	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.93	0.03	19.79	6.26	7.46	0.57	22.90	2.20	0.00	0.01	101.14
T674	77	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.15	0.02	20.14	5.29	7.10	0.39	21.95	3.85	0.00	0.00	99.89
T674	78	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.97	0.01	18.99	7.37	7.46	0.49	22.52	2.25	0.00	0.00	101.06
T674	79	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.27	0.05	19.47	6.22	7.48	0.50	20.03	5.17	0.00	0.02	100.23
T674	80	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.92	0.00	19.76	5.65	8.01	0.53	20.15	5.09	0.00	0.01	100.11
T674	81	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.96	0.03	18.23	8.25	7.20	0.49	22.07	3.29	0.02	0.01	100.55
T674	82	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.18	0.03	18.29	7.66	7.03	0.40	21.13	4.62	0.01	0.00	100.34
T674	83	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.92	0.28	20.12	4.50	7.68	0.39	20.83	4.76	0.04	0.01	99.53
T674	84	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.49	0.04	20.15	4.90	7.75	0.44	20.45	5.35	0.01	0.01	100.60
T674	85	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.33	0.00	19.22	6.45	7.31	0.39	20.12	6.12	0.00	0.01	100.95
T674	86	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.36	0.08	16.72	9.46	7.21	0.49	18.34	6.94	0.02	0.02	99.62
T674	87	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.35	0.08	19.53	5.47	7.52	0.38	20.95	4.69	0.00	0.01	99.97
T674	88	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.87	0.01	19.86	6.08	7.21	0.42	22.65	2.89	0.00	0.01	100.99
T674	89	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.76	0.24	19.88	5.49	7.22	0.43	21.31	4.99	0.05	0.01	101.38
T674	90	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.98	0.27	16.45	8.80	7.41	0.41	19.07	6.79	0.01	0.01	99.20
T674	91	94BCW320	till	0.25-0.5	purple	*plucked*											
T674	92	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.65	0.14	18.93	6.78	7.04	0.44	20.40	5.71	0.04	0.00	101.13
T674	93	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.98	0.45	19.01	5.17	7.58	0.37	20.44	5.46	0.00	0.02	99.47
T674	94	94BCW320	till	0.25-0.5	purple	Cr-pyrope	43.44	0.10	19.78	6.23	7.40	0.34	21.07	5.92	0.00	0.00	104.29
T674	95	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.36	0.37	18.43	6.13	8.42	0.40	18.63	6.90	0.00	0.00	100.64
T674	96	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.71	0.32	20.06	4.85	7.52	0.34	21.42	5.13	0.00	0.01	101.36
T674	97	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.31	0.25	20.90	3.92	7.16	0.32	21.98	4.95	0.04	0.00	100.82
T674	98	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.36	0.02	19.02	6.09	8.02	0.51	18.86	6.23	0.00	0.01	99.10
T674	99	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.75	0.15	19.53	5.26	7.32	0.36	20.92	5.12	0.03	0.00	99.43
T674	100	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.51	0.01	19.28	6.42	7.76	0.54	19.01	6.49	0.01	0.01	101.04
T674	101	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.11	0.48	19.94	4.43	7.84	0.39	21.01	5.27	0.03	0.00	100.49
T674	102	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.52	0.08	21.25	3.93	7.81	0.44	20.99	4.90	0.00	0.00	100.91
T674	103	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.07	0.38	15.98	9.31	7.61	0.37	19.12	6.99	0.02	0.01	99.85
T674	104	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.58	0.04	19.70	5.89	7.75	0.52	20.03	5.56	0.00	0.01	101.06
T674	105	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.93	0.10	19.21	5.59	11.74	0.56	17.07	6.55	0.00	0.01	101.77
T674	106	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.08	0.45	17.61	6.99	8.03	0.40	18.79	7.09	0.02	0.00	99.45

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	107	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.51	0.35	19.60	4.87	8.00	0.35	20.05	6.08	0.02	0.00	100.84
T674	108	94BCW320	till	0.25-0.5		*plucked*	0.15	0.02	0.01	0.00	0.00	0.00	0.02	0.01	0.10	0.00	0.31
T674	109	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.50	0.20	1.18	2.25	2.35	0.10	16.84	21.52	1.61	0.04	99.58
T674	110	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.83	0.05	1.98	2.97	1.85	0.07	16.23	19.88	2.26	0.00	99.14
T674	111	94BCW320	till	0.25-0.5	green	Cr-diopside	54.22	0.12	1.39	1.08	2.52	0.09	18.23	21.42	1.15	0.07	100.27
T674	112	94BCW320	till	0.25-0.5	green	*plucked*											
T674	113	94BCW320	till	0.25-0.5	green	Cr-diopside	53.85	0.22	1.36	1.09	2.49	0.09	17.72	22.10	1.07	0.07	100.06
T674	114	94BCW320	till	0.25-0.5	green	Cr-diopside	54.35	0.15	1.61	1.33	2.62	0.11	17.99	20.66	1.38	0.04	100.22
T674	115	94BCW320	till	0.25-0.5	green	Cr-diopside	53.90	0.08	0.71	1.09	1.67	0.07	17.50	24.04	0.79	0.02	99.86
T674	116	94BCW320	till	0.25-0.5	green	Cr-diopside	53.32	0.22	1.32	1.17	2.57	0.11	17.73	21.86	1.16	0.05	99.50
T674	117	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.76	0.25	1.32	2.11	2.46	0.09	16.91	20.81	1.69	0.03	99.43
T674	118	94BCW320	till	0.25-0.5	green	*plucked*											
T674	119	94BCW320	till	0.25-0.5	green	Cr-diopside	54.01	0.12	1.32	1.12	2.49	0.11	18.30	21.15	1.17	0.05	99.83
T674	120	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.33	0.22	1.32	2.83	2.17	0.06	16.53	21.32	1.72	0.06	99.55
T674	121	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.48	0.23	1.56	2.39	3.00	0.14	16.24	20.45	1.88	0.01	99.38
T674	122	94BCW320	till	0.25-0.5	green	Cr-diopside	51.94	0.12	4.21	0.92	1.65	0.12	16.64	23.69	0.69	0.03	99.99
T674	123	94BCW320	till	0.25-0.5	green	Cr-diopside	53.39	0.19	1.76	1.35	2.60	0.11	17.66	20.71	1.47	0.05	99.29
T674	124	94BCW320	till	0.25-0.5	green	Cr-diopside	53.61	0.21	1.38	1.17	2.68	0.09	17.27	21.43	1.23	0.05	99.10
T674	125	94BCW320	till	0.25-0.5	green	Cr-pyrope	40.10	0.56	16.63	8.47	7.84	0.44	19.28	6.26	0.06	0.01	99.65
T674	126	94BCW320	till	0.25-0.5	green	*plucked*											
T674	127	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.51	0.25	1.54	1.98	2.51	0.10	16.95	20.53	1.70	0.02	99.09
T674	128	94BCW320	till	0.25-0.5	black	Ti-Fe-oxide	2.14	58.29	1.37	0.08	28.34	0.11	0.82	0.17	0.00	0.02	91.32
T674	129	94BCW320	till	0.25-0.5	black	ilmenite	0.02	50.46	0.07	0.01	47.97	0.42	0.71	0.01	0.01	0.00	99.69
T674	130	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.75	0.05	0.15	48.95	0.51	0.12	0.01	0.00	0.03	99.56
T674	131	94BCW320	till	0.25-0.5	black	ilmenite	0.00	45.16	0.05	0.02	50.59	1.13	1.20	0.01	0.02	0.00	98.18
T674	132	94BCW320	till	0.25-0.5	black	ilmenite	0.06	51.81	0.03	0.06	47.58	0.50	0.19	0.01	0.00	0.00	100.24
T674	133	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.17	11.11	0.21	0.43	80.32	0.28	0.19	0.03	0.04	0.01	92.77
T674	134	94BCW320	till	0.25-0.5	black	ilmenite	0.15	46.44	0.23	0.03	50.66	1.43	0.16	0.02	0.00	0.00	99.10
T674	135	94BCW320	till	0.25-0.5	black	ilmenite	0.03	48.22	0.05	0.04	50.18	1.01	0.44	0.00	0.00	0.00	99.97
T674	136	94BCW320	till	0.25-0.5	black	ilmenite	0.01	50.12	0.05	0.02	48.35	0.51	0.30	0.00	0.01	0.02	99.38
T674	137	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.82	0.07	0.03	47.73	0.52	0.42	0.00	0.00	0.00	99.60
T674	138	94BCW320	till	0.25-0.5	black	ilmenite	0.07	50.66	0.07	0.02	48.18	0.46	0.38	0.01	0.00	0.01	99.85
T674	139	94BCW320	till	0.25-0.5	black	ilmenite	0.09	50.44	0.06	0.00	48.44	0.73	0.39	0.01	0.00	0.00	100.18
T674	140	94BCW320	till	0.25-0.5	black	ilmenite	0.05	50.64	0.07	0.02	47.90	0.50	0.33	0.00	0.03	0.00	99.53
T674	141	94BCW320	till	0.25-0.5	black	chromite	0.14	1.70	1.83	64.74	19.98	0.36	11.26	0.00	0.02	0.01	100.05
T674	142	94BCW320	till	0.25-0.5	black	ilmenite	0.06	51.66	0.04	0.01	47.69	1.03	0.15	0.01	0.00	0.01	100.66
T674	143	94BCW320	till	0.25-0.5	black	Ti-Fe-oxide	0.61	65.63	0.12	0.03	27.99	0.22	0.37	0.06	0.00	0.00	95.03
T674	144	94BCW320	till	0.25-0.5	black	chromite	0.17	0.85	2.12	66.30	18.88	0.27	11.10	0.02	0.00	0.00	99.71
T674	145	94BCW320	till	0.25-0.5	black	*plucked*											
T674	146	94BCW320	till	0.25-0.5	black	ilmenite	0.05	51.47	0.03	0.01	46.50	1.67	0.16	0.01	0.00	0.00	99.89
T674	147	94BCW320	till	0.25-0.5	black	*plucked*											
T674	148	94BCW320	till	0.25-0.5	black	rutile	0.00	93.85	0.15	0.39	0.94	0.01	0.04	0.02	0.00	0.00	95.41
T674	149	94BCW320	till	0.25-0.5	black	ilmenite	0.00	46.30	0.03	0.00	48.99	3.75	0.03	0.01	0.01	0.00	99.14
T674	150	94BCW320	till	0.25-0.5	black	ilmenite	0.02	50.87	0.10	0.03	47.74	0.46	0.64	0.01	0.00	0.00	99.87
T674	151	94BCW320	till	0.25-0.5	black	ilmenite	0.21	47.01	0.05	0.03	49.80	2.17	0.24	0.04	0.00	0.00	99.54
T674	152	94BCW320	till	0.25-0.5	black	*plucked*											
T674	153	94BCW320	till	0.25-0.5	black	ilmenite	0.05	47.53	0.04	0.00	47.29	5.11	0.08	0.02	0.01	0.01	100.12
T674	154	94BCW320	till	0.25-0.5	black	ilmenite	0.06	52.29	0.04	0.03	45.83	1.56	0.07	0.01	0.00	0.00	99.88
T674	155	94BCW320	till	0.25-0.5	black	ilmenite	0.02	50.60	0.07	0.05	47.77	0.56	0.34	0.03	0.00	0.00	99.44
T674	156	94BCW320	till	0.25-0.5	black	ilmenite	0.00	49.46	0.07	0.00	46.01	3.36	0.91	0.03	0.00	0.02	99.87
T674	157	94BCW320	till	0.25-0.5	black	ilmenite	0.03	50.49	0.03	0.01	46.64	2.22	0.08	0.01	0.00	0.01	99.52
T674	158	94BCW320	till	0.25-0.5	black	chromite	0.14	1.14	1.03	62.64	24.64	0.41	9.54	0.03	0.08	0.00	99.64

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T674	159	94BCW320	till	0.25-0.5	black	ilmenite	0.00	50.32	0.05	0.00	47.90	0.62	0.29	0.00	0.00	0.01	99.19
T674	160	94BCW320	till	0.25-0.5	black	ilmenite	0.05	50.62	0.01	0.02	44.92	4.33	0.05	0.00	0.02	0.00	100.02
T674	161	94BCW320	till	0.25-0.5	black	ilmenite	0.08	51.01	0.03	0.16	47.32	0.46	0.76	0.02	0.00	0.00	99.84
T674	162	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.66	0.04	0.17	48.69	2.27	0.05	0.02	0.00	0.01	98.91
T712	64	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.08	0.22	20.32	3.77	6.94	0.35	21.53	4.47	0.02	0.01	99.70
T712	65	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.48	0.29	19.25	4.87	7.18	0.38	20.91	5.01	0.01	0.02	99.40
T712	66	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.57	0.32	18.94	5.48	7.49	0.50	20.83	4.91	0.02	0.00	100.05
T712	67	94BCW320	till	0.5-0.84	purple	Cr-pyrope	42.66	0.16	20.78	3.07	7.94	0.41	21.14	4.24	0.03	0.02	100.45
T712	68	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.60	0.31	15.99	9 25	6.80	0.37	19.99	5.99	0.00	0.00	99.29
T712	69	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.11	0.13	18.74	5.53	7.31	0.44	20.38	5.44	0.00	0.00	99.10
T712	70	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.92	0.41	17.35	7.24	7.19	0.33	20.41	5.73	0.04	0.01	99.62
T712	71	94BCW320	till	0.5-0.84	purple	Cr-pyrope	39.80	0.22	14.65	10.80	8.86	0.49	17.59	7.02	0.00	0.00	99.43
T712	72	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.90	0.25	18.34	6.31	6.89	0.36	21.22	5.36	0.01	0.00	99.63
T712	73	94BCW320	till	0.5-0.84	purple	*missed grain*	13.63	0.03	5.81	2.39	1.75	0.09	5.61	1.60	0.06	0.01	30.98
T712	74	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.22	0.40	17.07	7.53	6.97	0.37	19.91	6.01	0.00	0.01	99.49
T712	75	94BCW320	till	0.5-0.84	purple	Cr-pyrope	41.08	0.00	17.92	7.36	7.81	0.59	19.03	6.10	0.02	0.02	99.92
T712	76	94BCW320	till	0.5-0.84	orange	almandine	37.31	0.08	20.93	0.02	32.29	0.75	6.80	1.11	0.01	0.00	99.31
T712	77	94BCW320	till	0.5-0.84	orange	almandine	37.10	0.21	20.47	0.04	28.03	1.35	3.32	8.39	0.00	0.00	98.91
T712	78	94BCW320	till	0.5-0.84	orange	almandine	38.14	0.05	20.56	0.01	25.97	0.65	4.37	9.98	0.00	0.00	99.74
T712	79	94BCW320	till	0.5-0.84	orange	almandine	36.94	0.09	20.43	0.00	25.26	4.15	1.50	10.65	0.02	0.00	99.03
T712	80	94BCW320	till	0.5-0.84	orange	almandine	38.45	0.07	21.06	0.04	24.12	0.64	7.28	7.68	0.00	0.00	99.33
T712	81	94BCW320	till	0.5-0.84	black	FeTi-oxide	0.16	18.17	0.20	0.08	72.42	0.20	0.28	0.02	0.00	0.00	91.52
T712	82	94BCW320	till	0.5-0.84	pl green	olivine	39.21	0.04	0.03	0.07	9.11	0.10	50.20	0.05	0.00	0.02	98.84
T712	83	94BCW320	till	0.5-0.84	pl green	enstatite	57.12	0.07	0.52	0.42	4.77	0.17	35.34	0.69	0.09	0.01	99.19
T712	84	94BCW320	till	0.5-0.84	pl green	enstatite	57.18	0.01	0.47	0.37	4.39	0.09	36.23	0.41	0.07	0.02	99.24
T712	85	94BCW320	till	0.5-0.84	green	Cr-diopside	53.94	0.06	1.50	1.24	2.53	0.10	17.61	20.35	1.18	0.06	98.57
T712	86	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.53	0.22	1.34	2.24	2.55	0.10	16.78	20.06	1.67	0.02	98.51
T712	87	94BCW320	till	0.5-0.84	green	Cr-diopside	54.26	0.02	1.36	1.08	2.59	0.09	18.02	20.77	1.03	0.05	99.26
T712	88	94BCW320	till	0.5-0.84	green	Cr-diopside	53.27	0.17	0.88	1.43	2.35	0.08	17.40	21.56	1.11	0.05	98.32
T712	89	94BCW320	till	0.5-0.84	green	Cr-diopside	54.09	0.23	1.65	1.29	2.56	0.14	17.33	20.14	1.35	0.04	98.83
T712	90	94BCW320	till	0.5-0.84	green	Cr-diopside	54.39	0.26	1.30	1.25	2.45	0.12	17.03	21.22	1.22	0.05	99.29
T712	91	94BCW320	till	0.5-0.84	green	Cr-diopside	53.36	0.19	1.42	1.31	2.49	0.08	17.15	20.53	1.19	0.05	97.78
T712	92	94BCW320	till	0.5-0.84	green	Cr-diopside	54.61	0.14	1.41	1.06	2.73	0.12	17.72	20.46	1.11	0.08	99.44
T712	93	94BCW320	till	0.5-0.84	green	Cr-diopside	54.31	0.11	1.37	1.23	2.66	0.12	17.38	20.78	1.10	0.07	99.12
T712	94	94BCW320	till	0.5-0.84	green	Cr-diopside	53.42	0.19	1.57	1.16	2.67	0.13	17.96	20.17	1.23	0.07	98.56
T712	95	94BCW320	till	0.5-0.84	green	HiCr-diopsid	53.40	0.18	1.34	2.10	2.42	0.07	16.81	20.11	1.65	0.05	98.13
T712	96	94BCW320	till	0.5-0.84	green	Cr-diopside	54.13	0.17	1.60	1.27	2.56	0.10	17.39	20.04	1.34	0.05	98.65
T712	97	94BCW320	till	0.5-0.84	green	HiCr-diopsid	54.92	0.26	1.39	1.83	2.58	0.13	16.54	20.36	1.59	0.03	99.62
T675	1	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.95	0.11	18.09	7.70	6.69	0.31	21.20	4.95	0.03	0.00	101.03
T675	2	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.75	0.16	18.23	6.99	7.39	0.36	19.59	5.96	0.02	0.00	99.44
T675	3	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.12	0.16	19.66	5.24	9.00	0.57	18.55	6.25	0.01	0.01	100.58
T675	4	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.31	0.41	18.52	6.65	7.13	0.41	20.83	5.22	0.05	0.00	100.55
T675	5	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.22	0.35	18.82	5.45	7.64	0.35	20.86	5.53	0.02	0.01	100.24
T675	6	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.10	0.09	17.25	8.67	7.36	0.47	19.24	6.53	0.02	0.01	100.72
T675	7	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.50	0.03	19.47	6.43	7.14	0.43	21.46	4.31	0.00	0.00	100.75
T675	8	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.82	0.29	17.58	7.36	7.24	0.37	19.98	6.07	0.03	0.00	99.74
T675	9	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.70	0.14	18.99	5.66	7.64	0.36	20.57	5.68	0.00	0.00	100.75
T675	10	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.83	0.01	18.54	7.09	7.34	0.54	19.72	5.96	0.02	0.00	100.03
T675	11	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.28	0.80	15.08	9.58	7.15	0.36	19.16	7.19	0.02	0.01	99.62
T675	12	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.42	0.05	18.79	6.57	7.42	0.41	19.41	6.31	0.03	0.00	99.40
T675	13	94BCW320	till	0.25-0.5	purple	Cr-pyrope	39.97	0.94	15.13	9.68	8.51	0.39	17.52	7.74	0.07	0.00	99.94
T675	14	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.69	0.35	17.89	7.31	7.14	0.35	20.38	5.80	0.03	0.00	99.93

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T675	15	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.08	0.04	19.47	6.08	7.24	0.54	20.53	5.17	0.02	0.00	100.17
T675	16	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.61	0.29	17.64	7.21	7.97	0.37	19.07	6.37	0.01	0.00	99.54
T675	17	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.09	17.59	8.20	6.73	0.41	20.04	6.04	0.01	0.01	100.04
T675	18	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.36	0.03	18.56	6.66	7.43	0.48	19.59	6.08	0.01	0.01	99.20
T675	19	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.99	0.43	18.44	6.46	7.19	0.36	20.44	5.59	0.05	0.00	99.96
T675	20	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.06	0.06	15.66	10.24	8.02	0.55	17.39	7.85	0.00	0.01	99.84
T675	21	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.17	0.04	19.21	6.29	8.07	0.46	19.33	6.01	0.00	0.00	100.57
T675	22	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.30	0.20	19.70	4.83	8.77	0.36	19.38	5.53	0.01	0.01	100.08
T675	23	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.73	0.22	20.34	4.64	6.88	0.41	21.20	5.10	0.03	0.00	100.55
T675	24	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.12	0.42	19.90	4.43	7.90	0.36	19.96	6.04	0.04	0.01	100.16
T675	25	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.79	0.37	20.38	3.95	7.54	0.38	21.10	5.06	0.02	0.00	100.59
T675	26	94BCW320	till	0.25-0.5	purple	Cr-pyrope	42.30	0.38	20.83	3.48	6.61	0.32	21.71	4.83	0.02	0.00	100.47
T675	27	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.02	0.30	16.45	9.24	6.85	0.43	19.89	6.39	0.01	0.00	100.58
T675	28	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.12	0.22	20.56	3.85	7.62	0.39	20.99	4.65	0.05	0.02	99.49
T675	29	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.83	0.34	19.58	4.81	8.32	0.45	19.08	6.73	0.02	0.00	101.15
T675	30	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.48	0.29	17.92	7.16	6.88	0.39	20.56	5.85	0.01	0.02	100.55
T675	31	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.80	0.17	19.39	5.66	7.36	0.39	20.71	5.26	0.00	0.01	99.73
T675	32	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.59	0.00	18.57	7.04	8.14	0.54	19.14	5.76	0.03	0.01	99.81
T675	33	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.51	0.40	18.33	6.63	7.02	0.38	20.25	5.87	0.04	0.01	100.42
T675	34	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.73	0.38	19.08	5.00	8.46	0.46	18.73	7.03	0.03	0.02	99.91
T675	35	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.47	0.06	17.08	8.55	7.58	0.52	18.79	6.76	0.01	0.01	99.81
T675	36	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.47	0.69	20.86	2.89	7.96	0.34	21.29	4.62	0.05	0.00	100.18
T675	37	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.84	0.33	18.06	6.69	6.82	0.38	20.44	5.55	0.02	0.00	99.12
T675	38	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.32	0.20	18.48	6.79	7.10	0.38	20.17	5.96	0.01	0.01	100.44
T675	39	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.45	0.31	20.53	3.66	7.51	0.30	21.07	4.72	0.05	0.01	99.61
T675	40	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.94	0.32	17.78	7.40	7.06	0.35	20.15	5.91	0.00	0.00	99.91
T675	41	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.29	0.05	21.81	2.65	7.93	0.38	21.49	4.53	0.02	0.00	100.15
T675	42	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.70	0.21	17.42	7.33	7.28	0.35	18.94	7.56	0.01	0.02	99.83
T675	43	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.91	0.22	17.68	7.54	7.40	0.37	19.87	6.09	0.03	0.01	100.12
T675	44	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.02	0.40	18.80	5.68	7.21	0.39	20.46	5.48	0.04	0.03	99.51
T675	45	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.86	0.26	18.55	6.53	7.45	0.43	20.51	5.32	0.03	0.01	99.95
T675	46	94BCW320	till	0.25-0.5	purple	Cr-pyrope	40.44	0.10	17.17	8.44	6.89	0.39	19.71	6.30	0.01	0.00	99.44
T675	47	94BCW320	till	0.25-0.5	purple	Cr-pyrope	41.10	0.33	19.59	4.64	8.43	0.38	19.05	6.83	0.03	0.00	100.38
T675	48	94BCW320	till	0.25-0.5	purple	almandine	37.15	0.03	21.36	0.02	30.27	2.83	4.62	3.66	0.01	0.00	99.94
T675	49	94BCW320	till	0.25-0.5	purple	almandine	37.22	0.04	21.21	0.00	25.80	2.93	1.87	10.80	0.01	0.00	99.87
T675	50	94BCW320	till	0.25-0.5	orange	almandine	37.02	0.08	21.02	0.04	33.52	0.14	1.60	6.86	0.00	0.01	100.29
T675	51	94BCW320	till	0.25-0.5	green	HiCr-diopsid	54.23	0.08	2.10	2.27	2.40	0.04	16.95	18.93	2.17	0.02	99.21
T675	52	94BCW320	till	0.25-0.5	green	Cr-diopside	54.23	0.16	1.66	1.18	2.57	0.12	17.64	20.70	1.39	0.05	99.72
T675	53	94BCW320	till	0.25-0.5	green	Cr-diopside	53.83	0.12	0.48	1.29	1.62	0.03	17.57	23.54	0.78	0.01	99.27
T675	54	94BCW320	till	0.25-0.5	green	Cr-diopside	54.21	0.15	1.39	0.93	2.66	0.05	18.12	21.09	1.11	0.09	99.79
T675	55	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.51	0.24	1.50	1.99	2.52	0.07	16.92	20.03	1.72	0.03	98.51
T675	56	94BCW320	till	0.25-0.5	green	Cr-diopside	53.92	0.14	1.30	1.10	2.53	0.11	18.06	21.07	1.07	0.03	99.33
T675	57	94BCW320	till	0.25-0.5	green	Cr-diopside	53.21	0.11	1.48	1.08	2.56	0.08	17.68	20.90	1.15	0.06	98.31
T675	58	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.54	0.20	1.07	1.79	2.32	0.05	16.89	21.91	1.23	0.03	99.03
T675	59	94BCW320	till	0.25-0.5	green	HiCr-diopsid	53.40	0.24	1.73	3.09	2.51	0.13	16.34	18.62	2.30	0.03	98.39
T675	60	94BCW320	till	0.25-0.5	green	Cr-diopside	53.55	0.26	2.01	0.55	3.09	0.09	17.04	21.04	1.42	0.03	99.08
T675	61	94BCW320	till	0.25-0.5	green	diopside	52.80	0.07	0.84	0.07	5.86	0.19	15.06	23.65	0.66	0.02	99.21
T675	62	94BCW320	till	0.25-0.5	green	diopside	52.61	0.06	1.15	0.04	5.74	0.23	15.40	23.77	0.57	0.02	99.58
T675	63	94BCW320	till	0.25-0.5	black	hercynite	0.11	0.03	54.53	0.14	39.17	0.09	3.27	0.00	0.05	0.01	97.40
T675	64	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.36	0.04	0.12	49.15	0.84	0.03	0.02	0.00	0.00	97.56
T675	65	94BCW320	till	0.25-0.5	black	ilmenite	0.00	47.69	0.12	0.03	48.36	0.96	0.41	0.02	0.00	0.01	97.59
T675	66	94BCW320	till	0.25-0.5	black	chromite	0.10	0.60	5.20	62.09	19.37	0.32	10.87	0.00	0.00	0.00	98.56

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T675	67	94BCW320	till	0.25-0.5	black	ilmenite	0.00	46.80	0.06	0.02	49.82	0.34	0.70	0.04	0.00	0.00	97.78
T675	68	94BCW320	till	0.25-0.5	black	amphibole	38.79	1.59	13.03	0.01	23.45	0.31	5.06	11.15	1.41	1.73	96.53
T675	69	94BCW320	till	0.25-0.5	black	chromite	0.22	3.67	5.25	52.59	25.01	0.39	10.86	0.02	0.00	0.00	98.00
T675	70	94BCW320	till	0.25-0.5	black	chromite	0.21	0.05	21.03	48.69	14.33	0.25	13.69	0.02	0.02	0.00	98.29
T675	71	94BCW320	till	0.25-0.5	black	ilmenite	0.02	49.90	0.08	0.03	47.44	0.55	0.51	0.02	0.04	0.01	98.59
T675	72	94BCW320	till	0.25-0.5	black	ilmenite	0.02	49.53	0.06	0.00	47.37	0.44	0.54	0.02	0.01	0.00	97.98
T675	73	94BCW320	till	0.25-0.5	black	ilmenite	0.05	48.49	0.03	0.00	47.07	2.35	0.04	0.02	0.00	0.01	98.07
T675	74	94BCW320	till	0.25-0.5	black	Fe-Ti-oxide	0.10	13.12	0.20	0.04	78.05	0.15	0.07	0.00	0.00	0.02	91.76
T675	75	94BCW320	till	0.25-0.5	black	ilmenite	0.69	47.53	0.04	0.00	46.85	2.47	0.08	0.01	0.00	0.00	97.66
T675	76	94BCW320	till	0.25-0.5	black	ilmenite	0.00	51.45	0.02	0.05	45.86	0.67	0.40	0.00	0.01	0.00	98.45
T675	77	94BCW320	till	0.25-0.5	black	augite	48.72	0.94	1.69	0.00	17.59	0.40	13.89	14.55	0.18	0.02	97.98
T675	78	94BCW320	till	0.25-0.5	grey	hematite	0.22	0.03	0.08	0.09	87.96	0.06	0.02	0.02	0.01	0.00	88.49
T712	98	94BCW320	till	0.5-0.84	purple	Cr-pyrope	40.19	0.20	15.71	9.28	8.70	0.49	18.36	6.49	0.01	0.00	99.42
T712	99	94BCW320	till	0.5-0.84	orange	almandine	37.39	0.07	20.59	0.04	27.57	1.22	2.71	9.76	0.00	0.02	99.39
T712	100	94BCW320	till	0.5-0.84	orange	almandine	36.85	0.11	20.56	0.03	28.46	0.64	2.61	9.58	0.03	0.02	98.88
T712	101	94BCW320	till	0.5-0.84	orange	pyrope	41.41	0.94	21.06	0.51	8.95	0.31	21.63	4.30	0.06	0.00	99.16
T712	102	94BCW320	till	0.5-0.84	orange	almandine	37.02	0.19	20.32	0.03	27.12	2.01	2.17	9.69	0.00	0.00	98.55
T712	103	94BCW320	till	0.5-0.84	black	ilmenite	0.02	53.38	0.02	0.03	45.53	1.74	0.08	0.01	0.00	0.00	100.81
T712	104	94BCW320	till	0.5-0.84	green	Cr-diopside	53.87	0.00	0.46	1.04	1.86	0.06	17.31	23.50	0.72	0.00	98.81
T712	105	94BCW320	till	0.5-0.84	green	Cr-diopside	53.30	0.16	1.56	1.22	2.65	0.09	17.92	20.19	1.28	0.04	98.39
T712	106	94BCW320	till	0.5-0.84	green	Cr-diopside	53.32	0.17	1.33	1.03	2.52	0.15	17.39	21.14	1.28	0.01	98.33
T712	107	94BCW320	till	0.5-0.84	green	Cr-diopside	52.97	0.26	1.74	0.97	3.34	0.14	16.89	19.34	1.58	0.03	97.26
T712	108	94BCW320	till	0.5-0.84	green	Cr-diopside	52.91	0.33	1.78	0.65	3.04	0.10	17.17	19.68	1.48	0.03	97.15
T712	109	94BCW320	till	0.5-0.84	pl green	enstatite	57.30	0.04	0.63	0.33	5.09	0.13	35.39	0.76	0.14	0.00	99.80
T724	64	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.60	0.00	17.64	7.58	8.03	0.46	18.98	6.13	0.01	0.00	99.43
T724	65	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.98	0.06	17.57	7.52	8.09	0.55	17.94	7.31	0.00	0.00	99.01
T724	66	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.81	0.39	15.09	9.54	7.23	0.45	18.84	7.06	0.00	0.02	99.43
T724	67	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.17	0.04	16.86	8.27	7.92	0.58	18.93	6.52	0.01	0.00	99.29
T724	68	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.47	0.00	18.11	6.85	7.19	0.47	21.97	3.59	0.02	0.02	98.70
T724	69	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.61	0.06	17.62	7.88	7.63	0.51	21.98	3.03	0.00	0.00	99.30
T724	70	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.67	0.00	18.15	6.91	7.28	0.51	21.75	3.53	0.00	0.01	98.80
T724	71	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.64	0.06	16.93	8.49	7.17	0.41	19.22	7.02	0.02	0.00	99.97
T724	72	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.61	0.00	20.40	4.13	7.65	0.40	21.30	4.23	0.00	0.00	99.72
T724	73	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.18	0.02	17.63	7.22	7.25	0.41	19.72	6.28	0.00	0.00	98.69
T724	74	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.35	0.05	15.94	9.86	7.19	0.46	18.93	7.12	0.00	0.00	99.91
T724	75	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.54	0.06	17.02	8.34	6.93	0.45	21.26	4.58	0.00	0.01	99.20
T724	76	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.80	0.03	17.58	7.65	8.19	0.49	18.92	6.22	0.00	0.01	99.90
T724	77	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.75	0.05	17.49	7.84	7.31	0.51	19.23	6.72	0.01	0.00	99.91
T724	78	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.62	0.11	17.69	7.16	7.05	0.48	20.17	5.92	0.02	0.01	99.22
T724	79	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.67	0.00	20.55	4.14	7.29	0.38	21.61	4.13	0.00	0.01	99.78
T724	80	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.89	0.37	18.35	6.31	7.81	0.46	20.41	5.36	0.04	0.02	99.99
T724	81	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.05	0.10	19.19	6.20	8.08	0.50	20.35	5.41	0.01	0.01	101.89
T724	82	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.38	0.00	16.11	9.54	7.04	0.47	18.81	7.19	0.00	0.00	99.54
T724	83	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.22	0.02	17.77	7.21	7.54	0.50	17.45	5.86	0.07	0.00	96.63
T724	84	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.17	0.55	17.51	6.28	8.13	0.49	18.94	6.93	0.06	0.02	99.08
T724	85	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.61	0.00	19.83	4.91	6.97	0.39	22.73	3.15	0.01	0.01	99.62
T724	86	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.38	0.07	18.88	5.74	7.52	0.43	20.24	5.96	0.00	0.00	99.23
T724	87	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.14	0.04	18.59	6.36	8.19	0.51	19.98	5.12	0.01	0.00	99.94
T724	88	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.34	0.00	19.27	5.62	7.52	0.57	23.03	1.65	0.02	0.02	99.03
T724	89	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.68	0.13	16.95	8.13	6.93	0.39	20.18	6.02	0.03	0.00	99.43
T724	90	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.06	0.43	18.17	5.20	8.94	0.44	18.38	7.18	0.00	0.00	98.80
T724	91	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.95	0.06	19.71	4.37	7.64	0.38	20.79	4.88	0.01	0.00	98.79

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T724	92	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.48	0.71	18.18	5.25	8.03	0.43	20.06	5.44	0.08	0.01	98.65
T724	93	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.00	0.19	17.76	6.91	7.26	0.44	20.36	5.61	0.01	0.01	99.55
T724	94	94BCW321	kimberlite	0.25-0.5	red-purple	Cr-Pyrope	40.91	0.63	18.78	4.55	8.46	0.40	19.97	5.73	0.00	0.00	99.43
T724	95	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.64	0.19	17.35	6.44	11.54	0.55	16.87	6.63	0.01	0.03	99.25
T724	96	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.65	0.05	17.40	7.85	7.51	0.51	19.41	6.14	0.02	0.01	99.55
T724	97	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.43	0.39	19.88	3.80	7.29	0.34	21.44	4.71	0.04	0.00	99.31
T724	98	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.98	0.36	17.85	6.63	7.14	0.44	20.85	5.53	0.04	0.01	99.82
T724	99	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.89	0.73	16.86	6.81	8.56	0.47	17.64	8.08	0.04	0.01	99.10
T724	100	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.36	0.00	16.81	8.46	6.95	0.41	19.26	6.85	0.00	0.01	99.11
T724	101	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.20	0.25	18.11	6.58	7.17	0.41	20.71	5.38	0.03	0.00	99.83
T724	102	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.47	0.30	17.99	6.22	7.75	0.44	20.45	5.53	0.02	0.01	99.17
T724	103	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.04	0.37	18.73	4.93	8.61	0.43	18.89	6.80	0.03	0.00	99.82
T724	104	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.66	0.07	16.25	9.45	7.24	0.47	19.68	6.14	0.03	0.00	100.00
T724	105	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.58	0.34	16.98	7.83	7.14	0.39	20.22	5.98	0.02	0.01	99.49
T724	106	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.39	0.36	21.32	2.41	7.88	0.37	21.52	4.39	0.05	0.00	100.69
T724	107	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	42.54	0.08	19.59	5.60	7.93	0.42	21.46	5.25	0.01	0.01	102.88
T724	108	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.79	0.32	17.52	6.77	7.20	0.41	20.16	5.78	0.01	0.01	98.95
T724	109	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.94	0.41	18.30	5.57	8.59	0.43	18.82	7.05	0.03	0.00	100.12
T724	110	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.19	0.03	17.78	7.71	7.54	0.49	19.47	6.32	0.03	0.00	100.55
T724	111	94BCW321	kimberlite	0.25-0.5	red-purple	Cr-Pyrope	42.12	0.39	20.70	2.29	7.89	0.31	21.49	4.49	0.02	0.01	99.72
T724	112	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.37	0.88	12.99	7.26	7.33	0.32	23.30	7.93	0.00	0.00	99.37
T724	113	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.00	0.56	15.21	9.83	7.23	0.42	19.29	6.64	0.07	0.01	99.27
T724	114	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.44	0.05	16.52	8.64	8.15	0.45	19.37	5.94	0.00	0.00	99.55
T724	115	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.12	0.35	18.13	5.33	8.10	0.44	19.04	6.82	0.03	0.01	98.35
T724	116	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.09	0.03	19.85	3.89	8.03	0.38	20.74	5.21	0.00	0.01	99.21
T724	117	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.96	0.02	18.24	6.66	7.25	0.44	22.16	3.52	0.00	0.01	99.26
T724	118	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.49	0.21	14.73	10.25	7.07	0.40	19.08	7.08	0.00	0.02	98.33
T724	119	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.37	18.82	5.24	7.59	0.32	20.66	5.39	0.03	0.01	99.69
T724	120	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.90	0.31	17.58	6.85	7.15	0.43	20.66	5.63	0.01	0.01	99.52
T724	121	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.27	0.05	16.16	9.24	7.34	0.46	18.88	7.07	0.01	0.00	99.48
T724	122	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.42	0.00	16.78	8.66	6.95	0.40	19.23	7.01	0.02	0.00	99.47
T724	123	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.85	0.32	16.70	8.53	7.15	0.39	20.02	6.22	0.00	0.00	100.17
T724	124	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.82	0.00	18.37	6.77	7.53	0.50	20.17	5.53	0.02	0.00	99.70
T724	125	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.31	19.53	4.28	7.75	0.41	20.89	5.26	0.01	0.00	99.70
T724	126	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.65	0.12	18.75	6.07	7.36	0.39	20.44	5.60	0.00	0.01	99.41
T724	127	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.72	0.36	19.85	3.88	7.35	0.37	21.42	5.01	0.03	0.00	100.00
T724	128	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.77	0.27	19.94	3.89	7.51	0.39	21.49	4.74	0.01	0.02	100.03
T724	129	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.69	0.36	18.64	5.17	8.55	0.44	18.88	6.88	0.00	0.00	99.63
T724	130	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.74	0.00	18.20	7.56	6.99	0.37	22.61	2.94	0.00	0.01	100.43
T724	131	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	40.86	0.19	16.50	8.05	7.73	0.39	19.77	6.47	0.04	0.01	100.00
T724	132	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.22	0.28	17.85	6.88	6.60	0.42	20.94	5.68	0.02	0.01	99.89
T724	133	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	39.91	0.21	15.05	10.48	7.29	0.51	19.45	6.56	0.03	0.02	99.51
T724	134	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.26	0.27	19.59	4.41	7.66	0.32	21.06	4.90	0.02	0.01	99.50
T724	135	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.01	0.00	18.50	6.54	7.74	0.50	22.81	1.87	0.01	0.00	98.98
T724	136	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.50	0.06	20.91	3.55	7.95	0.44	21.05	4.87	0.00	0.00	100.32
T724	137	94BCW321	kimberlite	0.25-0.5	purple	Cr-Pyrope	41.02	0.40	17.26	7.38	7.52	0.37	19.88	6.12	0.02	0.01	99.98
T725	1	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.82	0.15	0.77	2.57	1.93	0.14	17.16	21.37	1.52	0.02	100.45
T725	2	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.40	0.13	1.62	2.01	2.70	0.09	17.21	20.02	1.77	0.01	99.97
T725	3	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.28	0.20	1.70	1.41	2.84	0.10	17.09	20.54	1.64	0.03	99.84
T725	4	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.71	0.11	1.57	1.32	2.62	0.11	17.76	20.91	1.35	0.05	100.53
T725	5	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.09	0.17	0.90	2.45	2.43	0.12	16.82	21.41	1.53	0.05	99.96
T725	6	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.33	0.11	0.78	2.71	2.04	0.12	16.82	21.43	1.49	0.08	99.91

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T725	7	94BCW321	kimberlite	0.25-0.5	pale green	rthopyroxen	57.81	0.15	0.51	0.44	4.44	0.13	36.47	0.45	0.12	0.01	100.52
T725	8	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	55.09	0.30	1.30	2.10	2.43	0.08	17.08	21.03	1.63	0.05	101.09
T725	9	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.11	0.09	1.56	2.24	2.35	0.07	17.61	19.81	1.69	0.03	99.57
T725	10	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.94	0.21	1.26	0.68	3.11	0.13	17.93	21.54	1.06	0.06	100.92
T725	11	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.27	0.14	1.64	2.59	2.56	0.11	16.80	19.49	2.09	0.04	99.73
T725	12	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.23	0.12	1.60	1.70	2.57	0.11	17.51	20.50	1.45	0.04	99.83
T725	13	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.39	0.07	0.86	3.08	1.95	0.06	16.71	21.37	1.64	0.01	100.14
T725	14	94BCW321	kimberlite	0.25-0.5	green	Diopside	55.01	0.00	0.42	0.39	3.14	0.11	18.62	23.26	0.26	0.04	101.25
T725	15	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	53.94	0.21	1.61	3.72	2.26	0.07	16.43	18.60	2.30	0.04	99.18
T725	16	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.49	0.29	1.60	2.10	2.68	0.10	17.35	20.03	1.75	0.05	100.45
T725	17	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	55.18	0.05	1.59	2.42	2.34	0.12	17.70	19.51	1.75	0.04	100.70
T725	18	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	53.93	0.16	1.73	2.43	2.74	0.10	16.87	19.58	2.05	0.06	99.64
T725	19	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.96	0.23	1.28	1.87	2.48	0.11	17.13	20.90	1.62	0.02	100.60
T725	20	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.81	0.07	0.87	3.02	2.00	0.11	16.94	21.10	1.61	0.03	100.55
T725	21	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.91	0.10	0.80	3.07	1.97	0.11	16.86	21.08	1.59	0.04	100.52
T725	22	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	53.74	0.24	1.24	0.84	3.10	0.07	17.64	21.24	1.13	0.06	99.29
T725	23	94BCW321	kimberlite	0.25-0.5		*missed grain*	0.06	0.05	0.00	0.01	0.02	0.00	0.00	0.04	0.00	0.01	0.18
T725	24	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	53.94	0.13	0.38	2.10	2.07	0.09	16.99	22.84	1.20	0.03	99.77
T725	25	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.57	0.12	1.35	1.14	2.53	0.09	17.77	21.73	1.11	0.05	100.45
T725	26	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.32	0.06	0.81	2.88	2.06	0.15	16.91	21.35	1.64	0.02	100.18
T725	27	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	53.90	0.15	0.83	2.94	1.91	0.08	16.80	21.15	1.60	0.07	99.42
T725	28	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.31	0.17	1.39	1.31	2.60	0.09	18.06	21.05	1.17	0.07	100.22
T725	29	94BCW321	kimberlite	0.25-0.5	green	iCr-Diopsid	54.04	0.07	0.78	2.95	2.10	0.12	16.95	21.24	1.63	0.04	99.91
T725	30	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	54.22	0.12	1.35	1.12	2.70	0.15	18.13	21.25	1.04	0.07	100.13
T725	31	94BCW321	kimberlite	0.25-0.5	green	Cr-Diopside	53.63	0.12	1.24	1.32	2.68	0.11	17.58	21.82	1.04	0.05	99.58
T725	32	94BCW321	kimberlite	0.25-0.5	pale yellow	Olivine	40.88	0.07	0.02	0.05	7.88	0.12	51.15	0.05	0.00	0.00	100.21
T725	33	94BCW321	kimberlite	0.25-0.5	pale yellow	Olivine	40.06	0.00	0.04	0.06	8.23	0.10	51.27	0.04	0.00	0.00	99.80
T725	34	94BCW321	kimberlite	0.25-0.5	pale yellow	Olivine	39.98	0.00	0.01	0.09	8.21	0.14	51.04	0.02	0.00	0.00	99.49
T725	35	94BCW321	kimberlite	0.25-0.5	pale yellow	Olivine	40.42	0.00	0.04	0.06	7.43	0.13	51.65	0.05	0.00	0.01	99.79
T725	36	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	42.08	0.58	20.93	1.38	9.39	0.34	21.07	4.65	0.01	0.02	100.44
T725	37	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	41.42	0.85	21.17	0.22	10.33	0.28	20.49	4.28	0.01	0.02	99.06
T725	38	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	42.34	0.42	21.60	1.32	7.84	0.43	22.19	4.58	0.02	0.00	100.72
T725	39	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	41.88	0.87	21.28	0.23	10.48	0.27	20.78	4.31	0.04	0.01	100.14
T725	40	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	42.60	0.86	21.78	0.22	10.41	0.35	21.21	4.20	0.07	0.01	101.72
T725	41	94BCW321	kimberlite	0.25-0.5	orange-red	Pyrope	41.86	0.71	21.53	0.36	9.32	0.27	21.85	4.19	0.04	0.01	100.13
T725	42	94BCW321	kimberlite	0.25-0.5	red	Cr-Pyrope	41.77	0.32	20.76	3.02	7.90	0.31	21.53	4.79	0.02	0.00	100.40
T725	43	94BCW321	kimberlite	0.25-0.5	orange	Olivine	40.21	0.03	0.01	0.02	8.64	0.14	50.35	0.03	0.00	0.00	99.43
T725	44	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.15	4.42	4.42	51.42	29.97	0.45	9.52	0.04	0.00	0.00	100.38
T725	45	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.19	0.30	4.65	62.16	24.09	0.43	9.18	0.00	0.00	0.01	101.00
T725	46	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.14	4.46	3.38	52.19	30.25	0.42	9.40	0.00	0.02	0.00	100.27
T725	47	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.13	2.72	1.74	59.24	27.60	0.40	9.23	0.00	0.00	0.01	101.07
T725	48	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.14	0.15	6.78	60.70	22.46	0.37	9.59	0.03	0.00	0.01	100.21
T725	49	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.10	0.06	8.87	62.14	18.85	0.39	10.55	0.02	0.03	0.02	101.02
T725	50	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.13	0.09	14.41	57.00	17.27	0.34	10.78	0.01	0.01	0.01	100.05
T725	51	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.14	0.93	1.88	67.94	19.23	0.35	10.93	0.02	0.00	0.00	101.42
T725	52	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.12	0.21	6.17	65.66	17.11	0.33	11.66	0.00	0.00	0.01	101.27
T725	53	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.14	0.64	5.82	62.77	20.27	0.31	11.16	0.01	0.00	0.01	101.14
T725	54	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.17	1.13	1.59	68.08	19.17	0.37	10.93	0.03	0.00	0.00	101.47
T725	55	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.17	4.43	4.32	51.68	30.27	0.38	9.48	0.01	0.01	0.01	100.74
T725	56	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.18	3.78	3.66	57.10	25.60	0.45	10.45	0.03	0.00	0.00	101.25
T725	57	94BCW321	kimberlite	0.25-0.5	black	Chromite	0.17	0.17	6.71	60.70	22.57	0.36	9.83	0.01	0.00	0.02	100.54
T725	58	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.16	1.06	2.14	66.33	21.43	0.40	9.96	0.03	0.00	0.00	101.52

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SiO2	TiO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T725	59	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.17	1.67	1.77	66.39	20.31	0.41	10.88	0.02	0.00	0.01	101.64
T725	60	94BCW321	kimberlite	0.25-0.5	black	Mg-ilmenite	0.12	50.20	0.38	6.78	28.60	0.33	12.64	0.03	0.00	0.01	99.10
T725	61	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.15	0.12	5.35	65.74	18.34	0.34	11.08	0.00	0.00	0.02	101.13
T725	62	94BCW321	kimberlite	0.25-0.5	black	Chromite*	0.27	1.72	4.02	62.82	20.56	0.35	11.37	0.02	0.00	0.00	101.13
T725	63	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.82	0.02	16.70	8.89	6.98	0.45	20.23	5.70	0.00	0.03	99.81
T725	64	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.22	0.00	16.08	9.59	7.11	0.45	19.10	7.07	0.00	0.01	99.62
T725	65	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.09	0.00	16.53	9.53	7.07	0.45	18.78	7.07	0.01	0.02	100.54
T725	66	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.19	18.64	6.14	7.18	0.37	21.12	5.16	0.02	0.00	100.21
T725	67	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.00	19.09	5.66	7.38	0.40	20.64	5.60	0.00	0.01	99.89
T725	68	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.04	0.00	17.19	8.32	7.07	0.43	21.42	4.58	0.02	0.02	100.08
T725	69	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.12	0.18	16.63	8.76	6.98	0.43	19.90	6.31	0.00	0.01	100.32
T725	70	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.21	0.12	17.41	7.92	7.11	0.37	20.39	6.15	0.03	0.00	100.70
T725	71	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.35	0.00	18.13	7.39	8.16	0.46	19.37	6.06	0.02	0.01	100.95
T725	72	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.83	0.00	18.88	6.24	8.65	0.57	18.69	6.52	0.00	0.01	100.39
T725	73	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.20	0.00	19.28	5.01	7.38	0.43	19.85	5.31	0.00	0.01	98.45
T725	74	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.12	0.00	17.44	8.21	7.35	0.48	19.30	6.81	0.01	0.00	100.71
T725	75	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.22	0.00	18.67	6.70	7.15	0.47	22.27	3.56	0.00	0.00	100.03
T725	76	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.60	0.34	19.34	4.61	7.94	0.40	20.23	6.12	0.02	0.01	100.60
T725	77	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.88	0.00	19.18	5.18	7.71	0.37	20.65	5.55	0.00	0.01	99.52
T725	78	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.97	0.00	17.57	7.87	7.42	0.49	19.44	6.37	0.00	0.00	100.14
T725	79	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.89	0.06	16.67	9.05	7.09	0.47	19.26	6.81	0.00	0.00	100.32
T725	80	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.17	0.03	20.28	4.83	7.08	0.39	23.87	2.02	0.00	0.03	100.70
T725	81	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.54	0.05	18.66	6.77	7.24	0.44	22.89	2.60	0.00	0.01	100.20
T725	82	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.74	0.07	16.09	9.55	7.22	0.39	18.86	7.22	0.01	0.01	100.15
T725	83	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.36	0.06	17.90	7.10	7.49	0.43	19.65	6.22	0.01	0.00	100.23
T725	84	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.25	0.06	19.06	5.79	7.80	0.42	20.27	5.65	0.00	0.02	100.33
T725	85	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.44	0.02	17.79	7.27	7.78	0.52	19.04	6.56	0.01	0.02	99.47
T725	86	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.45	0.00	20.01	4.95	8.07	0.54	22.56	2.21	0.01	0.00	99.80
T725	87	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.65	0.07	18.55	6.70	7.80	0.54	20.41	5.56	0.01	0.01	100.29
T725	88	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.21	0.00	18.45	6.89	7.47	0.40	20.03	6.32	0.01	0.00	100.78
T725	89	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.58	0.03	16.26	9.43	6.93	0.44	19.01	7.08	0.02	0.01	99.80
T725	90	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.10	19.15	5.66	7.49	0.41	20.54	5.68	0.00	0.00	100.41
T725	91	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.16	0.01	17.68	8.09	7.71	0.56	20.52	5.01	0.03	0.00	100.74
T725	92	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.01	0.01	17.91	7.38	7.68	0.43	19.93	5.65	0.01	0.00	100.01
T725	93	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.09	0.02	17.20	8.43	7.12	0.46	19.51	6.83	0.02	0.00	100.68
T725	94	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.74	0.02	19.90	4.91	7.06	0.35	23.57	1.99	0.02	0.01	99.56
T726	1	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.20	0.21	16.93	8.10	7.38	0.47	19.75	6.13	0.00	0.01	100.18
T726	2	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.55	0.45	13.25	9.35	6.90	0.36	13.84	5.68	0.04	0.03	91.44
T726	3	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.08	0.27	21.02	2.93	8.42	0.45	21.07	4.54	0.06	0.00	100.85
T726	4	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.11	0.33	17.54	7.09	7.06	0.39	20.62	5.88	0.01	0.00	100.03
T726	5	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.19	0.33	20.50	3.50	7.81	0.41	21.31	4.60	0.02	0.00	100.66
T726	6	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.27	0.00	20.07	5.17	6.99	0.41	23.12	2.58	0.00	0.00	100.61
T726	7	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.47	0.25	18.56	6.25	7.47	0.45	20.44	5.30	0.01	0.01	100.21
T726	8	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.29	0.16	21.54	2.11	8.45	0.39	21.31	4.44	0.00	0.02	100.70
T726	9	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.18	0.35	17.44	7.36	7.23	0.35	20.15	6.10	0.01	0.02	100.18
T726	10	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.07	0.34	18.79	5.58	7.03	0.38	21.02	5.40	0.02	0.01	100.64
T726	11	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.06	0.21	17.13	8.11	6.92	0.39	20.16	6.15	0.00	0.01	100.12
T726	12	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.56	0.44	18.78	4.81	8.66	0.40	18.59	6.91	0.03	0.01	99.17
T726	13	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.61	0.06	17.38	7.41	7.32	0.38	20.24	5.83	0.02	0.00	99.25
T726	14	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.25	17.87	6.57	7.49	0.37	20.57	5.86	0.03	0.00	100.09
T726	15	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.64	0.29	20.14	3.85	7.59	0.38	21.82	4.81	0.00	0.00	100.53
T726	16	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.43	0.50	19.37	4.48	8.30	0.39	20.15	6.03	0.02	0.03	100.69

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T726	17	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.24	0.26	18.24	6.33	7.38	0.39	20.88	5.52	0.03	0.00	100.26
T726	18	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.70	0.05	18.09	7.28	7.95	0.51	19.16	6.06	0.00	0.00	99.78
T726	19	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.03	0.34	18.07	6.95	7.05	0.35	20.68	5.70	0.02	0.00	100.19
T726	20	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.08	0.20	21.19	3.00	7.51	0.39	21.78	4.61	0.05	0.00	100.80
T726	21	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.85	0.06	19.03	5.29	7.56	0.36	21.17	5.43	0.00	0.00	100.74
T726	22	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.14	0.29	18.40	5.53	8.80	0.44	18.50	7.46	0.02	0.00	100.58
T726	23	94BCW321	kimberlite	0.5-0.84	red	Pyrope	43.08	0.23	22.44	1.00	7.81	0.38	21.93	4.48	0.03	0.00	101.38
T726	24	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.01	0.22	21.19	2.53	8.53	0.48	21.34	4.43	0.05	0.00	100.78
T726	25	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	42.12	0.39	20.68	2.27	8.00	0.34	21.15	4.68	0.01	0.01	99.64
T726	26	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.52	0.33	19.12	5.20	7.73	0.30	20.84	5.36	0.04	0.00	100.44
T726	27	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.77	0.05	16.32	9.76	6.89	0.37	20.41	5.43	0.00	0.01	100.00
T726	28	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.70	0.42	16.63	8.43	7.28	0.35	19.97	6.02	0.07	0.01	99.89
T726	29	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.10	0.00	18.03	6.98	7.56	0.49	20.72	4.75	0.04	0.01	99.67
T726	30	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	39.99	0.28	16.00	9.28	8.16	0.51	19.18	5.71	0.06	0.01	99.19
T726	31	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.77	0.28	17.20	7.76	7.24	0.44	20.15	5.74	0.04	0.02	99.62
T726	32	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.48	0.46	17.67	6.92	8.34	0.42	19.14	6.37	0.02	0.00	99.82
T726	33	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	41.39	0.33	18.37	5.91	7.72	0.37	20.82	5.46	0.04	0.01	100.43
T726	34	94BCW321	kimberlite	0.5-0.84	purple	Cr-Pyrope	40.92	0.43	18.74	4.95	8.60	0.39	19.26	6.88	0.03	0.00	100.20
T726	35	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.15	0.09	0.87	2.97	2.00	0.15	16.88	21.20	1.65	0.03	99.98
T726	36	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	53.69	0.20	0.80	2.92	1.97	0.14	16.87	21.24	1.62	0.03	99.47
T726	37	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.32	0.10	0.83	3.01	2.05	0.09	16.85	21.09	1.67	0.02	100.03
T726	38	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	53.55	0.10	0.88	3.10	2.10	0.12	17.11	21.21	1.67	0.05	99.88
T726	39	94BCW321	kimberlite	0.5-0.84	green	Cr-Diopside	53.76	0.09	1.35	1.18	2.64	0.13	18.38	20.94	1.17	0.06	99.69
T726	40	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.31	0.27	1.63	2.09	2.66	0.13	17.17	20.12	1.80	0.04	100.23
T726	41	94BCW321	kimberlite	0.5-0.84	green	Diopside	54.53	0.21	1.85	0.33	3.10	0.08	17.41	20.83	1.41	0.01	99.76
T726	42	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	53.94	0.03	1.88	2.77	2.31	0.12	16.34	19.16	2.25	0.04	98.84
T726	43	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.59	0.08	0.83	3.09	2.01	0.11	16.97	21.17	1.64	0.01	100.49
T726	44	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.58	0.31	1.34	2.06	2.47	0.10	17.14	20.84	1.71	0.06	100.61
T726	45	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	54.14	0.32	1.64	1.60	2.85	0.12	17.43	20.35	1.74	0.02	100.22
T726	46	94BCW321	kimberlite	0.5-0.84	green	Cr-Diopside	54.43	0.20	0.79	1.31	2.43	0.12	17.14	22.95	1.07	0.03	100.46
T726	47	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	53.59	0.31	1.61	2.08	2.56	0.07	16.96	20.02	1.75	0.04	98.98
T726	48	94BCW321	kimberlite	0.5-0.84	green	Cr-Diopside	54.50	0.10	1.32	1.24	2.64	0.12	18.03	21.02	1.16	0.06	100.18
T726	49	94BCW321	kimberlite	0.5-0.84	green	iCr-Diopsid	53.98	0.38	1.62	1.78	2.57	0.10	17.08	20.33	1.83	0.02	99.69
T726	50	94BCW321	kimberlite	0.5-0.84	green	Cr-Diopside	54.62	0.25	1.52	0.61	2.56	0.12	17.55	21.51	1.27	0.01	100.03
T726	51	94BCW321	kimberlite	0.5-0.84	black	Chromite	0.14	3.33	3.11	58.18	25.41	0.37	10.24	0.00	0.00	0.00	100.78
T726	52	94BCW321	kimberlite	0.5-0.84	black	Chromite	0.15	3.81	2.47	55.30	28.52	0.39	9.36	0.01	0.00	0.00	100.00
T726	53	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	50.83	0.40	6.80	28.81	0.32	12.46	0.03	0.02	0.01	99.78
T726	54	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.09	50.71	0.30	5.67	29.81	0.27	12.39	0.04	0.00	0.01	99.28
T726	55	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.13	54.01	0.34	5.36	25.78	0.36	14.71	0.02	0.02	0.00	100.73
T726	56	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.09	50.86	0.39	6.83	28.65	0.27	12.65	0.04	0.00	0.00	99.77
T726	57	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	52.79	0.35	4.63	28.82	0.33	13.07	0.04	0.00	0.01	100.15
T726	58	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	50.66	0.30	5.62	29.69	0.28	12.33	0.03	0.02	0.00	99.02
T726	59	94BCW321	kimberlite	0.5-0.84	black	Chromite*	0.12	0.14	5.45	63.96	19.50	0.33	11.33	0.01	0.00	0.01	100.85
T726	60	94BCW321	kimberlite	0.5-0.84	black	Chromite*	0.09	0.16	6.79	62.10	20.39	0.38	10.91	0.04	0.00	0.00	100.86
T726	61	94BCW321	kimberlite	0.5-0.84	black	Chromite	0.14	3.34	3.07	57.59	25.22	0.41	10.13	0.00	0.00	0.01	99.92
T726	62	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.08	51.41	0.40	6.44	27.37	0.30	13.46	0.03	0.00	0.01	99.49
T726	63	94BCW321	kimberlite	0.5-0.84	black	Chromite	0.16	3.54	3.78	56.06	25.59	0.34	10.44	0.06	0.00	0.02	99.98
T726	64	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.19	50.81	0.40	6.74	28.49	0.31	12.40	0.04	0.00	0.00	99.37
T726	65	94BCW321	kimberlite	0.5-0.84	black	Chromite*	0.11	0.56	5.76	63.91	22.15	0.43	8.90	0.01	0.00	0.01	101.82
T726	66	94BCW321	kimberlite	0.5-0.84	black	Mg-ilmenite	0.11	51.73	0.23	6.24	26.32	0.32	14.07	0.09	0.00	0.00	99.11
T727	1	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.84	0.25	18.05	6.86	7.28	0.37	20.91	5.60	0.04	0.00	101.20
T727	2	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.11	0.04	17.34	7.90	7.10	0.42	19.60	6.69	0.01	0.01	100.22

Appendix C.1 Probe data for all mineral grains picked from kimberlite and till

Moun	No.	Sample	Material	Size (mm)	Color	Mineral	SIO2	TIO2	AL2O3	CR2O	FEO	MNO	MGO	CAO	NA2O	K2O	TOTAL
T727	3	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.22	0.39	17.35	7.56	7.39	0.35	20.26	5.91	0.03	0.01	100.46
T727	4	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.04	0.03	19.38	6.14	7.39	0.46	23.59	1.91	0.00	0.01	100.95
T727	5	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.86	0.13	18.13	7.17	6.95	0.38	20.81	5.87	0.04	0.01	101.34
T727	6	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.66	0.17	17.17	7.93	7.03	0.43	20.44	6.04	0.02	0.00	100.89
T727	7	94BCW321	kimberlite	0.84-2.0	pink	Cr-Pyrope	42.27	0.25	21.07	2.86	8.41	0.42	21.31	4.49	0.06	0.02	101.16
T727	8	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.74	0.02	19.50	5.82	6.47	0.39	23.46	2.57	0.04	0.00	100.00
T727	9	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.71	0.30	20.12	3.84	7.62	0.36	21.52	4.87	0.02	0.01	101.37
T727	10	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	40.71	0.11	15.48	10.51	7.13	0.47	19.20	6.89	0.00	0.00	100.49
T727	11	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	42.16	0.08	19.25	4.98	7.47	0.31	20.98	5.56	0.02	0.00	100.79
T727	12	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.19	0.13	17.63	7.68	7.18	0.36	20.68	5.85	0.00	0.00	100.71
T727	13	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.95	0.26	20.54	3.50	7.74	0.36	21.64	4.50	0.02	0.01	100.51
T727	14	94BCW321	kimberlite	0.84-2.0	red	Cr-Pyrope	41.44	0.43	19.53	4.04	10.23	0.50	19.66	4.89	0.07	0.01	100.80
T727	15	94BCW321	kimberlite	0.84-2.0	purple	Cr-Pyrope	41.32	0.31	17.99	7.01	7.01	0.36	20.97	5.59	0.05	0.00	100.61
T727	16	94BCW321	kimberlite	0.84-2.0	green	iCr-Diopsid	54.43	0.10	1.17	3.16	2.02	0.13	16.92	20.94	1.77	0.07	100.70
T727	17	94BCW321	kimberlite	0.84-2.0	green	Cr-Diopside	54.76	0.10	0.45	1.25	1.73	0.06	17.62	23.92	0.79	0.01	100.67
T727	18	94BCW321	kimberlite	0.84-2.0	green	iCr-Diopsid	53.90	0.10	1.59	1.68	2.59	0.12	17.67	20.52	1.46	0.05	99.68
T727	19	94BCW321	kimberlite	0.84-2.0	green	iCr-Diopsid	54.49	0.22	1.23	1.81	2.43	0.07	17.31	21.07	1.57	0.03	100.23
T727	20	94BCW321	kimberlite	0.84-2.0	green	Cr-Diopside	54.67	0.09	1.15	1.09	2.79	0.10	18.68	21.14	0.97	0.07	100.74
T727	21	94BCW321	kimberlite	0.84-2.0	black	Mg-ilmenite	0.84	58.42	0.13	2.39	13.56	0.44	18.26	5.18	0.13	0.03	99.37
T727	22	94BCW321	kimberlite	0.84-2.0	black	Mg-ilmenite	0.08	51.17	0.42	6.79	28.78	0.31	12.67	0.00	0.00	0.00	100.22
T727	23	94BCW321	kimberlite	0.84-2.0	black	Chromite*	0.11	0.03	6.45	65.07	17.04	0.35	11.42	0.02	0.00	0.03	100.50
T727	24	94BCW321	kimberlite	0.84-2.0	black	Mg-ilmenite	0.12	50.96	0.40	6.79	29.03	0.32	12.47	0.01	0.02	0.01	100.12
T727	25	94BCW321	kimberlite	0.84-2.0	black	Mg-ilmenite	0.06	50.76	0.43	6.74	28.72	0.34	12.52	0.02	0.00	0.00	99.59
T727	26	94BCW321	kimberlite	0.84-2.0	black	Chromite*	0.15	0.10	6.24	65.03	19.17	0.39	10.77	0.00	0.03	0.01	101.89
T727	27	94BCW321	kimberlite	0.84-2.0	black	Mg-ilmenite	0.09	51.26	0.39	6.76	28.71	0.35	12.63	0.04	0.00	0.02	100.24